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ALLAHABAD UNIVERSITY STUDIES

VOL. II

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The Vice-Chancellor and the Heads of Departments

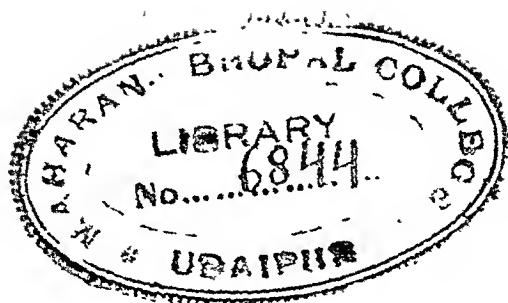


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PREFACE

THE reception accorded to the First Volume of our Studies has proved encouraging enough to make us decide to continue the journal. On account of the exigencies of printing, the present volume could not be as representative of our various departments as its predecessor. The volume is to be got out before the end of the session, and this has led to a large number of contributions to be held over for the next volume. We expect to be able to make better arrangements in future to guard against such eventualities.

THE UNIVERSITY :
March 31, 1926. }

GANGANATHA JHA,
Vice-Chancellor.

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THE ORIGIN AND DEVELOPMENT OF THE MUSLIM LAW OF MARRIAGE

BY

Dr. MAHOMED U. S. JUNG, M.A., LL.D., Bar-at-Law,

Reader-in-Law.

The development of the institution of marriage is a matter of historical interest. It originated in the form of irregular unions and marital unions.¹ Marriage by capture was the primitive form of marriage, and ultimately it gave way to elopement with consent, "a compromise with real capture." The institution of marriage by purchase gradually grew up, and this notion of acquisition of a wife, as property, paved the way for marriage by agreement, subject to a dowry. Polyandry, polygamy and even monogamy were enjoined by immemorial customs, and practised in different parts of the world. The transition from the sacramental indissolubility of marriage to the treatment of marriage, as a civil institution, is a modern idea.²

¹ "Marital unions are the outcome of sexual selection and restrictions." Vinogradoff, 'Historical Jurisprudence,' vol. I, p. 167.

² "In civil society it becomes a civil contract regulated and prescribed by law." Story, 'Conflict of Laws,' p. 143.

There was racing and chasing on Cannobie Lee,
 But the lost bride of Netherby ne'er did they see.
 So daring in love, and so dauntless in war,
 Have ye e'er heard of gallant like young Lochinwar ? "

The Hindu Law recognises marriage by forcible capture as "Rakshasa rite," and attaches no insignificance to such an institution. The laws of Manu enacted :

III. 33.

"The forcible abduction of a maiden from her home, while हत्वा क्षित्वा च भित्त्वा च क्रोशन्तीं रुदतीं गृह्णात् । she cries and weeps after (her प्रसह्य कन्याहरणं राजसो विधिरुच्यते kinsmen) have been slain or wounded and their houses broken up is called the Rakshasa rite."

Marriage by capture is a form of marriages of dominion. McLennan thinks that "Marriage by capture arose from the rule of exogamy." Westermarck suggests that "the practice of capturing women for wives is due chiefly to the aversion to close intermarriage..... together with the difficulty a savage man has in procuring a wife in a friendly manner without giving compensation for the loss he inflicts on her father." Marriage by elopement is another instance of capture with consent.

Capture was afterwards supplemented by purchase. This is really the beginning of marriage by agreement, it precedes marriage by contract. The contract of purchase is subject to well-understood or specified conditions. The kin of the woman attempts to maintain authority and supervision over the bride, and consider themselves under obligations to revenge her ill-treatment and death if caused by the husband. This was exactly the case in ancient Arabia. Robertson Smith says, "the strength of the feelings of kinship bettered the wife's position, whether she were married in her own kin or to an alien, unless she were carried far out of the reach of her natural protectors."²

¹ 'The History of Human Marriage,' p. 389.

² 'Kinship,' p. 123.

In Ancient India the *Asura* form of marriage (i.e., by purchase) was prevalent. It is still common among the Sudras. The laws of Manu forbid such unions

III. 51

No father who knows (the law) must take even the smallest gratuity for his daughter "

न कन्याया रिता विद्वान्पुत्रस्या-
कुरुकर्मन्वपि

IX. 98.

Even a Sudra ought not to take a nuptial fee when he gives away his daughter for he who takes a fee sells his daughter covering (the transaction by an other name)

आदतीत न सुद्रोऽपि शुल्कं दुदितान्ददन् ।
शुल्कं हि गृह्यन् कुस्ते दन्ने दुदितविश्रयं

Similarly the ancient Greeks used to buy wives, and later its reverse the dowry system was inaugurated as a mark of distinction between a wife and a concubine.

At Rome the Plebian institution of marriage, "*Co-emptio in Mann*," was a fictitious sale "*per aes et libram*." Dr Hunter suggests that co-emptio was a survival of "the rape of the Sabine women," a substitution of purchase and sale for the capture of wives, while in Germany marriage by purchase was abolished after the introduction of Christianity

The debased form of marriage by purchase is the institution of buying females to serve as slaves and concubines. The Muslim Law recognises slavery, but prefers that *Nikah* should be contracted with the slave girls. Islam does not tolerate simple (unalloyed) concubinage. In the Holy Koran, whenever the establishment of conjugal relations with slave girls is mentioned, it is indicated that marriage should be solemnized

"But whoever of you is not possessed of means to marry free believing women, then he may marry those which your right hands possess from believing slave girls and Allah knows best your faith "

Part V, hh. IV

دس نم مستلع منكم طولا ان حتم
المستعصم المومنين من مملوكات
من قبيحتكم المومنين - والله اعلم بايمانكم -

The Holy Prophet altered the notion that a woman was like an acquisition of a thing, and the solemn marriage subject to dowry purged of all its evil incidents was established for the Muslims of Arabia. The dower may be a sum of money, or property or even personal service. The custom of obtaining a wife by services rendered to her father was common among the ancient people of the world. A Hebrew tradition has well familiarized us:

The Raddul Muhtár says :—

"Moses contracted a marriage with the daughter of Shoab and the dower was that she should graze his sheep for eight years."

والمختار
زوج موسى بنته علي ان يرعى
له غنمه مائة سنة

The system of dowry was not a new idea, it was customary among the ancient people. Rev. James Macdonald in his book 'Light in Africa' observed an interesting custom among the South African tribes: "A man obtains a wife by giving her father a certain number of cattle, she retains certain rights to property and an interest in the cattle paid for her. They are a guarantee for the husband's good behaviour."¹

The institution of dower has passed through successive stages. The Tafsír Ahmadí says that in ancient Arabia, dower formed part of the marriage contract, but was generally misappropriated by the wife's relatives; dower was originally similar to purchase or presents, and finally it came to be regarded as the exclusive property of the wife, capable of being transferred to her heirs. Imám Muslim cites an example how in ancient Arabia dower was avoided by a device called Shighár (شغار) :

A gives in marriage his daughter or sister to B in consideration of B giving his daughter or sister to A.

The institution of Shighár is similar to the conditional "Sata" marriage of the Hindu Law. Islam does not tolerate any device whether by contract or otherwise to defeat the right of the wife to dower.

¹ P. 159.

The Muslim dower is also similar to the *donatio propter nuptias* of the Roman Law

Mr Sutherland in his book 'Origin and Growth of the Moral Instinct' lays down a bold proposition. He observes "In cultured communities the dowry dies out, just as the purchase-money declined in the civilised stages"¹ The institution of dower is rapidly becoming extinct. Dower is now more or less nominal, nevertheless it serves a useful purpose, as it checks the exercise of the arbitrary power of divorce, which the law has conferred solely on the husband. In Muslim legal treatise dower is known as *sadac*² and the wife acquires a complete legal right over her dower

Polyandry is an old institution and according to McLennan and Morgan it is a natural stage in the development of society.³ It was practised in Greece Eusebius and Socrates mention it. The Nairs, the Todas and various tribes of Tibet and the Australian aborigines have practised it. Polyandry was generally prevalent in the form of communal marriage, where the kinsmen have a sort of common property in one or more women especially set apart. Such was the custom in Australia among the Diem and Lindred tribes

It is curious but convincing that polyandry was practised at the sacred temples where female ascetics and dedicated maidens largely assembled to offer their homage to the deity. It was so in Greece. Eusebius refers in this connection to the Astarte worship. Sozomen speaks about the holy virgins of Heliopolis and says that Constantine forbade the Phoenicians from practising the prostitution of the maidens. In India the life led by

¹ P 243

² Robertson Smith 'Kinship' p 93. In Islam *sadac* simply means a dowry and is synonymous with *mahr*. But originally the two words were quite distinct. *sadac* is a gift to the wife and *mahr* to the parents of the wife.

³ Westermarck says (The History of Human Marriage p 515) "Polyandry seems, indeed to presuppose a certain amount of civilisation. We have no trustworthy account of its occurrence among the lowest savage races"

the *Jat-Vairagis* in the *Akharas* is another instance of the prostitution at the temples. The same was the case in Arabia: "In Arabia and elsewhere in the Semitic world.....unrestricted prostitution of married and unmarried women was practised at the temples and defended on the analogy of the license allowed to herself by the unmarried mother-goddess."¹

The oldest evidence of the existence of polyandry in Arabia is that of Strabo: "All the kindred have their property in common, the eldest being lord; all have one wife and it is first come first served, the man who enters to her leaving at the door the stick which it is usual for every one to carry; but the night she spends with the eldest. Hence all are brothers of all (within the stock of *συνγενεῖς*); they have also conjugal intercourse with mothers....."². This institution is termed as a "regulated polyandry." It closely resembles the "fraternal polyandry" which existed in India. The classical instance of the Pandavas and Draupadi need only be cited. The institution of levirate (which is sanctioned by the Muslim Law also) is simply a relic of fraternal polyandry.

Ṣaḥīḥ Bukhārī, a book of the traditions universally revered by the Muslims of the world, as well as Abu Dāūd, report two famous *Hadises* about the existence of a peculiar system of polyandry in ancient Arabia:

1. "A number of men, not more than ten, used to cohabit with a woman. When she conceived and was delivered of a child, then she would send for all these men, who were bound to attend. She told them, 'You remember our agreement, now I have brought forth a child and I am of opinion that this child is so and so's issue.'

ابوداؤد

١ يجتمع الزهراء دون العشرة فيد -
خلون علي المرأة كلهم يصيها فاذا
حملت وضعت وصرخا بعد ان تضع
حملها ارسلت اليهم فلم يستطع رجل
منهم ان يمتنع حتي يجتمعوا عندها
فتقول لهم قد عرفتكم الذي كان من امركم وقد
ولدت وهو ابنك يا فلان فتسمى من
احبت منهم باسمه فيلحق به ولدها -

¹ Robertson Smith 'Kinship,' p. 165.

² Robertson Smith 'Kinship,' p. 158.

The named father had to recognise the paternity "

2 Many men used to have sexual intercourse with a woman who would not refuse any visitors. When such a woman had an issue born to her then her 'frequent visitors would assemble and by physiognomistic test used to decide who was the father of the child'

٢ يستحب الناس الكسر بعد خلون على المرأة لا تتع من جاعها وهي انما يكون يصر على انواهي رايت كني عما لمن ارادني ذلك عليهن قالا حملت فوصف حثها جميعا ودموا لهم ثاثة ثمة العوا ولدا وانني يرون القتل ودمي اسه -

The Prophet of Islam abolished the institution of polyandry, and forbade such practices.

The custom of polyandry was the result of poverty, and excess of the male population due to the large number of female infanticides. The Arabian desert was an ideal place, for its poverty was proverbial, and female infanticide was enjoined by custom as obligatory

Women who had a free hand and selected their own men could hardly be considered to be acquainted with the notion of chastity, their children were all full tribesmen without any distinction of legitimate and illegitimate offspring. However, with the introduction of the "higher polyandry" where the group of husbands reserves the wife exclusively, the idea of conjugal fidelity develops, and gradually monandry comes into existence, and a man prefers to have a wife to himself. Still however it is for the husband to decide who shall actually beget his wife's children. We find in an *Hadis* reported in the *Bakhan* and *Abu Dáúd* a curious instance where the husband tolerates polyandry to obtain a "goodly seed"

'A custom was that a husband would say to his wife after the termination of her monthly courses, "send for such a man and

كل الرجل يقول لامرأته اذا طهرت من ميسها اركب الي ثكن قاصمي منه، معتدتها ورجها، لا يسها اعدا حي منس حثها من ذلك الرجل

have intercourse with him." and the husband would keep away from her, until she had conceived by that man; and thereafter would return to her. This was done with a view to obtain a noble seed."

الذي تستبضع منه فإذا زين حملها أصابها زوجها أحب وإن يفعل ذلك
 رغبة في نجابة الولد فكان هذا النكاح
 سمي نكاح الاستبضاع -

This institution was common among the ancient Arabs, and was put to an end after the dawn of Islam, as being nothing short of permissible fornication and adultery.

The Koran says :

Part XV, ch. XVII

"And go not near adultery, it ولا تقربوا الزنى انه كان فاحشة وساء سبيلاً
 is a foul deed and an evil path."

It is curious that a parallel system was in existence in India called Niyoga, though now obsolete ; it was recognised by the laws of Manu for the Sudras :

"On failure of issue (by her husband) a woman, who has been authorised, may obtain (in the proper manner prescribed) the desired offspring by (cohabitation with) a brother-in-law or a Sapinda."

IX. 59

देवरादा सपिण्डादा
 स्त्रिया सभामियुक्त्या ।
 प्रजेप्सिताधिगन्तव्या
 संतानस्य परिचये ॥

The Hindus sanctioned Niyoga, as it was necessary for a Hindu to have a son to perform the sacred rites. It is suggested, that among the Semites a similar notion that the dead man will miss something if he leaves no children to worship had survived. Apparently this was not the sole reason. The Arabs desired to obtain a noble seed—a gifted child with natural attributes of heredity, and this is far from being a desire to have a son to perform the sacred rites. Plato was of a similar opinion. In Greece, he said, "Every individual is bound to provide for a continuance of representations to succeed himself as ministers of the divinity."

Westermarck observes "Polygamy was permitted by most of the ancient peoples with whom history acquaints us, and is, in our day, permitted by several civilized nations and the bulk of savage tribes"¹ Plurality of wives was considered as an additional source of wealth by the ancient people. However all the ancient nations did not indulge in polygamy. The Veddis of Ceylon wandered through the forests in monogamous pairs with their wives, children and hunting dogs.

Polygamy was practised by the Jews and was enjoined in certain cases by the Moslem Law. The 'ancient' Christian Church did not forbid it. The Anabaptists and Bernardino Ochino approved of the institution of plurality of wives. In 1540 Luther consented to the second marriage of Philip the Magnanimous, who married with his wife's approval. Among the tribes of Africa, Australia and the Mormons of America, we find that polygamy was customary. Harald Harfagar, Vladimir of Russia, Samo of Bohemia, Meshko of Poland are all credited with plurality of wives. The Hindu Law does not restrict the number of wives. The monogamous marriage of modern times is the outcome of a slow growth, starting from the state of sexual promiscuity, irregular and temporary unions.

The Romans later on preferred monogamy, and it was a fundamental rule of Roman Law that a man could not have two wives at the same time "*duos uxores eodem tempore habere non licet*."

The Muslim Law inherited the doctrine of plurality of wives from time immemorial. So many Prophets had married a number of wives. Jacob had Joseph and his brothers born of different wives, the Prophet Solomon had contracted numerous marriages. Abraham the traditional founder of the Quraysh Arabs had at least two wives. He left his second wife Hagar and Ishmael at Mecca.

¹ The History of Human Marriage p 431

While in ancient Arabia there was no restriction as to the number of wives that one could legally marry, Islam limited the number to four, and represented monogamy as an ideal form of marriage.

The Holy Koran says:

Part IV, ch. IV.

"Marry such women as seem good to you—two, three or four; but if you fear that you cannot do justice (between them) then marry only one, or what your right hand possesses (*e.g.*, captives of war and slaves); this is better so that you may not deviate from the right path."

فَاتَّكُوا مَا طَابَ لَكُمْ مِنَ النِّسَاءِ
مَثْنِي وَثَلَتٍ رُبَّحَ - فَإِنْ خِفْتُمْ أَلَّا
تَعْدِلُوا فَوَاحِدَةً أَوْ مَا مَلَكَ
إِيْمَانُكُمْ ذَلِكَ أَذْنَى الْأَعْدِلُوا -

And the Koran says in the next 'Sípára':

Part V, ch. IV.

"And it is not in your power to do justice between wives, even though you may covet it; but keep yourself not aloof from one with total aversion, nor leave her like one in suspense, and if you make reconciliations, and guard yourself, then surely Allah is Forgiving, Merciful."

وَلَنْ تَسْتَطِيعُوا أَنْ تَعْدِلُوا بَيْنَ النِّسَاءِ
وَلَوْ حَرَصْتُمْ فَلَا تَمِيلُوا كُلَّ امِيلٍ فَتَذَرُوهَا
كَالْمُعَلَّقَةِ وَإِنْ تُصْلِحُوا وَاتَّقُوا فَإِنَّ اللَّهَ
كَانَ غَفُورًا رَحِيمًا -

Thus Islam prefers monogamy, and it is only in special cases that it permits subsequent marriages.

The Laws of Manu lay down some conditions for celebrating subsequent marriages :

"A barren wife may be super-

IX. 81.

seded in the eighth year, she whose children (all) die in the tenth, she who bears only daughters in the eleventh, but she who is quarrelsome without delay."

वन्ध्याष्टमेऽधिषेद्यावदे दशमे तु भृतप्रजा ।
एकादशे स्त्रीजननी सद्यस्त्व प्रियवादिनी

It is said that the Mûtaẓila sect of Islam holds marriage with more than one wife as unlawful. Ameer Ali boldly observes, "there is a great difference of opinion among the followers of Islam regarding the lawfulness of polygamy.....A

of a non-matrimonial character. Among many uncivilised peoples both sexes enjoy perfect freedom previous to marriage, and in some cases it is considered almost dishonourable for a girl to have no lover". Such was the custom prevalent in the East African Barea and Kunama, in Malay Archipelago, Indo-China and elsewhere. Among the Angami Nagas promiscuous connection is customary, as men are desirous of having proof as to their capacity of procreation before they contract a lawful marriage. It is curious that the conception of chastity begins with marriage, and even here the standard varies. According to Mr Griffiths, 'Confucianism virtually admits two standards of morality, one for man, another for woman. Chastity is a female virtue, it is a part of womanly duty, it has little or no relation to man personally'. Similarly the ancient Hebrews forbid fornication to women but not to men. In Greece virginity was "an object of worship". Athens was proud of virgin's temple, the Parthenon. At Rome the profligacy of women was checked by various enactments, and Tacitus says, that the publication of a list of prostitutes on the Aedile's register was in itself a sufficient punishment. The Hindus conceive chastity as virtue. Chastity was not a virtue in ancient Arabia, but a gradual progress was going on. At Mecca the women had accepted chastity and we read of Luma, wife of Zayad, who was carried away by a *Falagh*, cut herself from her camel and so preferred death rather than that any shame should be attributed to her family and sons on her account. Women who still persisted and adhered to the old laxity now formed a class of their own—prostitutes, and their houses were marked by a flag hung over the door. Chastity was still no part of for the men, it was not considered as disgrace to visit

¹ The Origin and Development of Moral Ideas vol II p 422
 Peligons of Japan p 143

not prostitute thy daughter to cause her to be a whore'
 XIV 23

such houses, and men were prepared to admit and acknowledge a prostitute's child. The Muslim world regards chastity as an essential duty for all Muslims.

The Sunni Muhammadans disapprove of temporary marriages, and according to a tradition reported by the fourth Khalif Ali, the Prophet forbade Mut'a marriages on the day of the battle of Khayber in accordance with the verse of the Koran found in the Surat-ul-Muminin :

Part XVIII, ch. XXIII.

"None is lawful except their wives, or those whom their right hands possess, for they surely are not blameable."

الا على ازواجهم او ما ملكت ايماهم
فانهم غيور ملو مين -

Accordingly the Raddul Muhtar clearly says :

"Marriage in Mut'a form is invalid."

و بطل تكاح متعة و مؤقت -

And if a Nikah for a fixed term is celebrated, the doctrine of Imam Zafar applies, and such a marriage is regarded as permanent.

The Shi'a hold that Mut'a marriages are lawful. The essential conditions are a dower and a period for cohabitation which are mutually agreed upon, and the marriage lasts till the efflux of the fixed period, and according to Shara-i-looma, dissolution of marriage could also be effected by "the doctrine of the gift of the term."

The laws determining separation of the married parties are of considerable historical interest. In a sacramental marriage divorce was impossible.

Divorce. The Christian Church treats marriage as a sacrament. The man and wife are made "one flesh by the act of God." "What therefore God hath joined together let no man put asunder." "Quod Deus conjunxit, homon non separet." For the separation of the parties the Canon Law required the decree of nullity, "Annulatio Matrimonii," a judicial fiction that such

a marriage never existed. The same was the case under the Hindu Law. The Laws of Manu provided no divorce.

IX 46

' Neither by sale nor by re pudiation is a wife released from her husband such we know the law to be which the Lord of creatures (Prajapati) made of old '

न विप्रय विप्रगम्या भर्तुर्मायाविमुच्यते ।
एवम विप्रणीम प्राक् प्रनापतिनिमित्तम् ॥
(Some substitute "निप्रय" for "विप्रय")

For the Hindus marriage is a religious duty, and the custom of *sattvee* is the consequence of the complete union. In ancient Arabia divorce was very common, and it was of various kinds, and it took place generally at the instance of the husband.

Zihar in the literal sense means "the back," in law it signifies a man's comparing or likening his wife to his mother, or any female relations within the prohibited degree whether by consanguinity, affinity or fosterage. The usual phrase is "thou art to me as the back of my mother." In archaic times *Zihar* stood like divorce, but the Muslim Law considers it as a temporary prohibition without dissolving marriage, and it continues till the performance of expiation.

The Holy Koran says

Part XXVIII, ch LVIII

As for those of you who put away their wives by likening their backs to the backs of their mothers let them know that they are not their mothers their mothers are no others than those who gave them birth and surely they utter a hateful word and a falsehood and verily Allah pardons and forgives

الذين طهروا منكم من نسائهم
امواتهم - ان امه من الله والى الله
وانهم لم يقلوا منكراً من القول ذموا والى الله
لعنوا ملعونون -

The atonement for *Zihar* consists either of (a) manumission of a slave, (b) fasting for two months, (c) feeding sixty poor persons

a marriage never existed. The same was the case under the Hindu Law. The Laws of Manu provided no divorce.

IX 46

Neither by sale nor by re-
pudiation is a wife released from
her husband such we know the
law to be which the Lord of crea-
tures (Prajapati) made of old.

न विप्रय विप्रयार्थी भद्रभावाविमुच्यत ।
एवैधम विप्रयानाम प्राक् प्रजापतिनिमित्तम् ॥
(Some substitute "निक्रय" for
"विप्रय")

For the Hindus marriage is a religious duty, and the custom of *sattie* is the consequence of the complete union. In ancient Arabia divorce was very common, and it was of various kinds and it took place generally at the instance of the husband.

Zihar in the literal sense means "the back," in law it signifies a man's comparing or likening his wife to his mother, or any female relations within the prohibited degree whether by consanguinity, affinity or fosterage. The usual phrase is "thou art to me as the back of my mother." In archaic times *Zihar* stood like divorce, but the Muslim Law considers it as a temporary prohibition without dissolving marriage, and it continues till the performance of expiation.

The Holy Koran says

Part XXVIII, ch. LVIII.

As for those of you who put away their wives by likening their backs to the backs of their mothers, let them know that they are not their mothers, their mothers are no others than those who gave them birth and surely they utter a hateful word and a falsehood and verily Allah pardons and forgives

الذين يمينون منكم من وراءهم
امهاتهم - ان امهاتهم الا الذي ولد يوم
وانهم يفترون منكم من اقرب الناس وان الله
لعفو عور -

The atonement for *Zihar* consists either of (a) manumission of a slave, (b) fasting for two months, (c) feeding sixty poor persons.

Ila was common in the dark ages, and in its “primitive sense, it signifies a vow,” and was considered as a divorce. The Muslim Law construes it as a divorce suspended for four months. *Ila* takes place when a person swears that he will not have sexual intercourse with his wife for four months. *Ila* must not be for a shorter period.

The Koran mentions *Ila*: Part II, ch. II.

“Those who swear that they لَّذِينَ يَرْتَلُونَ مِنْ نَفَاهِهِمْ تَرَبَّصْ
will not go unto their wives, اربعة اشهر فان نازا فان الله غفور رحيم -
should wait four months. But
if they go back, then Allah is
Forgiving and Merciful.”

The Prophet of Islam disapproved of *Ila* and *Zihar* and prescribed the recognised modes of *Talak-us-Sunnat*.

Mr. Abdur Rahim points out, “sometimes an Arab would pronounce *Talaq*¹ ten times and take his wife back and again divorce her and then take her back and so on.” The wife in such a predicament was absolutely at the mercy of her husband, it depended upon the discretion of the husband to dissolve the marriage tie completely or not.

Separation may also be produced not merely by the dismissal of the wife, but at her demand or on the demand of her kin. This system was also prevalent in Arabia. Where the matriarchal system was flourishing, the wife could easily effect divorce. Robertson Smith says: “The women in the *Jahiliya*, or some of them had the right to dismiss their husbands and the form of dismissal was this: If they lived in a tent they turned it round so that if the door faced east it now faced west and when the man saw this he knew that he was dismissed.”² According to the traditional custom a man had no right to enter the tent of his unwilling wife. But in

¹ ‘Muhammadian Jurisprudence,’ p. 10.

² ‘Kinship,’ p. 65.

*baal*¹ marriage of ancient Arabia there also existed divorce at the request of the wife known as *Khula'* which survived down to the Muslim Law. *Khula'* was a friendly arrangement between the husband and the wife's father by which the husband was repaid the dowry.

Under the Muslim Law divorce is an arbitrary act of a husband, and he may divorce his wife with or without her consent. Divorce may be verbal only and no special expressions are necessary, it suffices if it denotes a clear intention to dissolve the marriage, and writing is not necessary to the legal validity of divorce. Divorce is either revocable or irrevocable. During the period of *iddat*² marriage is deemed to subsist with respect to various of its effects such as maintenance, residence, the right of inheritance and the husband may take back his wife but after the period has elapsed, he cannot exercise this right. The husband can delegate to a third person or to his wife the power to repudiate herself, *برخص لثانی*. *Khula'* is a repudiation by consent and is at the instance of the wife for a valuable consideration. *Mubarat* is a divorce by mutual consent.

The Muslim family law is based upon the patriarchal ^{Patriarchal system} system. However we can trace with confidence ^{the existence of} the existence of matrarchal system in ancient Arabia. According to McLennan and Morgan formerly the family centred round the mother, but Westermarck and A. Lang hold that the highest state was patriarchal. The "Cyclopean family" was ever maintained under the despotic sway of the sire over his wife and children. The matrarchal system is loosely knitted, it is based on the rule of the weaker sex, hence the ultimate triumph of the more solid and single patriarchal organization was inevitable. Wherever the matrarchal system

¹ *Baal* marriage is under husband's oath only with male kinship.
² *Iddat* is the waiting for a definite period—on divorce it is 3 months on widowhood it is 4 months and ten days. In the pre-Islamic era *iddat* was for one whole year.

has flourished, it was because of the support of man. There is a definite element of male influence such as the mother's brother who is looked upon as her natural helper. The Nairs represent a fully-developed matriarchal organisation of this kind and the mother holds real property, and the inheritance passes through her.

However, there is no inherent incompatibility between the patriarchal and matriarchal systems, and the transition from one system to the other can be detected.

Vinogradoff observes, "the important question is that of *residence* whether the household is within the circle of influence of the wife's or husband's family."¹

We have seen that in Arabia "the tent" of the woman was her exclusive home, and so long as this tent was situated in the neighbourhood of her relations, the woman was able to check any attempt to interference and domination on the part of her husband, but the moment she elected to live in the company of her husband's tribes, she naturally lost her independence, and thus unconsciously surrendered herself to the control of the husband. The natural conditions in Arabia only hastened the fall of the matriarchal system. The notion that a wife was like an acquisition of a thing, by capture or by purchase, led to a disastrous result.

The Arabs soon came to regard women as subject of inheritance. The sons and heirs were entitled to inherit their step-mothers by simply throwing a sheet of cloth on them.

The Tafsir Ahmadî says :

"During the time of ignorance, if a man died and left a widow, step-sons and relatives, then if one of them threw a sheet of cloth over the widow, she immediately became his wife though unwilling, and the same former dower was fixed again."

تفسير احمدى
ان في الجاهلية لما مات الرجل وترك
امراة وابنا من غيرها واقارب يلقى ذالك الذين
اولا اقارب وقت وفات ذالك الرجل ثوبا عليها
فقد جرها اكرها وقرر وامهرها على ماتود
مورثتهم -

¹ 'Historical Jurisprudence,' vol. , p. 196.

the women from hereditary bondage, restore her position and give her a legal status in the eye of the law. The entire Muslim Law stands as a testimony. The abolition of polyandry, the restrictions imposed on polygamy, and the recognition of the prohibited circle for intermarriage by reason of consanguinity, affinity and fosterage, the treatment of marriage as a devotion and condemnation of divorce, the recognition that a woman is a free agent in marriage, that her consent is essential to validate the marriage contract, and the amendment of the pre-Islamic law of inheritance by giving the woman definite share in property, the modification in the law of dower, its treatment as exclusive property of the wife, and above all the recognition of the wife's separate property and independent status in law, these all are the facts which speak for themselves.

Westermarck has well observed "The history of human marriage is the history of a relation in which women have been gradually triumphing over the passions, the prejudices and the selfish interests of men."¹

CONCLUSION

The Muslim law of marriage stands in complete contrast to vague and indefinite customs of marriage that were common in ancient Arabia, but these immemorial usages and customs form an integral part of the history of Muslim marriage. In Islam marriage is both a civil contract and a religious rite. According to all jurists it is a *Sunnat Muwallidah*. It is an institution for the procreation of children, the regulation of social life and for the benefit of society. There is no merger of the personality of the husband and wife. Property is not the object of marriage. Dower is not like the institution of purchase-money for the wife. Divorce is permissible in special circumstances, it is tolerated as a necessary evil.

¹ The History of Human Marriage, p. 500

BERNARD SHAW AS A CRITIC OF CONTEMPORARY SOCIETY

BY

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"He who can, does. He who cannot, teaches."

—*Maxims for Revolutionists.*

The apotheosis of Bernard Shaw has been justly described as one of the miracles of the present age. His literary career was begun nearly half a century ago, when he left Ireland and came to London, throwing, as he tells us, not himself but his mother into the struggle for life, and writing novels which nobody would publish. But for many years the British public was either indifferent or hostile to him. To-day he is publicly referred to by a royal personage as "that world-famous Irish dramatist;" Mr. A. B. Walkley describes him as "the venerable patriarch, who now dominates the spiritual universe as a kind of Pope Bernard I;" while the London correspondent of the *Statesman* is "thrilled" as he sees before him in a theatre the figure of the "first play-wright of the age." It would seem that Bernard Shaw has conquered his public. We have at last managed to catch up with a few of his ideas, and have learned to look with curiosity and respect, if not with complete understanding, upon an author who, it appears, was not a mere buffoon after all, and whose greatness, having been duly recognised upon the Continent for years, must now, in true British fashion, be proclaimed at length in the country of his adoption. There is even a danger that Shaw may before long become a classic, and

join the company of those writers whose works we all take as read and leave in undisturbed seclusion upon our shelves.

It may be doubted, however, whether Bernard Shaw is really better understood to day than in the old days, when his name was the Shibboleth of the few and the butt or execration of the many. To a number, perhaps even to the majority, of the folk who read or see his plays he is still the mountebank who says refreshingly witty things but whose opinions need not be taken seriously while the Shavians, like most devotees of a literary cult, are too apt to copy the whims and eccentricities of the master while they neglect his real and essential message. In India, to put it mildly, it can hardly be said that his plays have been exhaustively studied, as anyone who tries to collect material upon them will rapidly discover. A glance at the syllabuses of most of our Indian universities might indeed lead one to suppose that English literature came to an end with the death of Robert Louis Stevenson. But the time is ripe for an intelligent study and discussion of the plays, and this little paper is offered as a brief indication of one or two possible lines of research.

Bernard Shaw has touched life at so many points and has displayed such a many-sided activity that he is perfectly justified in claiming that the life of such a man as himself is worth writing "as a historical document". He has come before the public as an orator a critic of art and music, a journalist pure and simple, as socialist, humanitarian, philosopher, dramatist, and novelist, and in each department he has done work sufficient to make the fame of any ordinary man. But it is undoubtedly to the plays, with their brilliant and illuminating prefaces, that we must look both for the fullest expression of his personality and for his most enduring

¹Cp. Shanks p. II (For the references, see the Bibliographical Note at the end of this article)

work. Under one aspect, the aspect upon which I more particularly wish to dwell, his plays are a mirror of contemporary society. In that revival of the drama which is undoubtedly the most remarkable phenomenon of the English literature of recent years, they occupy the leading place, and Shaw has invented a new type of play—the drama of discussion—which is of especial value as a social “document.” Though in advance of their age when they were first published, his earlier plays are now an admirable reflection of the ideas which they have partly helped to form, and nowhere can that astounding change of outlook and convention which has marked the present century in England be more concisely and more effectively studied. Considered as a part of the general Ibsenite and European movement in the direction of realistic or naturalistic drama, the English dramatic outburst of the first ten or twelve years of the present century is of very great interest. The drama has in many cases become identified with attacks upon existing conventions of various kinds—religious, social, domestic, intellectual: and the many brilliant qualities of Shaw’s plays place him easily at the head of those who have thus sought to make the theatre a platform for the propagation of ideas.¹

For present purposes, then, we may set aside Shaw’s fiction, his public speeches, his essays on social and economic questions, and his miscellaneous pamphlets, and confine ourselves to the plays and their prefaces, together with the essays bearing directly upon the drama. There is an advantage in this separation, for the plays contain the quintessence of Shaw’s thought and are the vehicle of everything that is of importance in his message to his age. Moreover, as is now pretty generally recognised, they are examples of very high excellence in a new kind of dramatic art, although this excellence is regarded by

¹ For an account of the newer drama in England see Jameson, Lewisohn, Williams, and the late William Archer’s *The Old Drama and the New*.

the dramatist himself purely as a means to an end. "For art's sake alone," he says, "I would not face the toil of writing a single sentence." Nevertheless, we who enjoy and profit by the art which he has produced may be pardoned if we sometimes turn aside from the end and take pleasure in the contemplation of the means. It is the same with the more purely literary quality of style, upon which Shaw has some very sensible remarks to make in the passage to which reference has just been made. The business of his style, in preface, dialogue, or soliloquy, is to get his message across from the stage or the printed book to the persons for whom it is meant, but this should not blind us to the fact that Shaw is one of the greatest prose-writers of the day, wielding a nervous, concise, and rapid style which illuminates like a searchlight any subject which it touches. It may also rise at times to the level of pure poetry, as, for instance, in certain now famous passages in *Getting Married*¹, *John Bull's Other Island*², and *Back to Methuselah*³. Again, the wit, vitality, and freshness of his dialogue have been abundantly praised, but justice has not always been done to the vigour, richness, variety, and truth to life of much of his character-drawing. Shaw himself, in his customary witty fashion, puts the criticism against his characters much better than his critics,⁴ and there are certainly moments when the dramatist

¹ *Man and Superman Epistle Dedicatory* p xxxv

² p 278. Where a volume contains more than one play, the references are to the pages of the whole volume.

³ pp 17-18

⁴ pp 255-7. The list might easily be extended, witness the gorgeous setting of *Cæsar and Cleopatra* the charm of some of the dialogue in *Saint Joan* and the indefinable air of melancholy beauty which invests the whole of *Heartbreak House*. The more poetic view of the relations between the sexes is seen not only in *Getting Married* but also in *Mrs Warren's Profession* and *Candida*.

"Vaughan—Well, at all events you can't deny that the characters in this play were quite distinguishable from one another. That proves it's not by 'shaw' because all Shaw's characters are himself mere puppets stuck up to spout Shaw. It's only the actors that make them seem different"—*Fanny's First Play* Epilogue p 232.

tends to lose himself in the philosopher or the critic. Yet most of the major characters, and the minor characters almost without exception, are individual and dramatic to a degree. In fact, a recent critic is probably not very far wrong when he says that Shaw's characters are not appreciated because they are *too* real, and adds: "It is hard to avoid the conclusion that Shaw's strongest talent (when he chooses to exert it) lies in the portrayal of human beings as they are, and that his fame will ultimately rest neither upon his ideas nor wit but upon his poetry and characterisation."¹ It should also be remembered that, as Bergson has pointed out,² a tendency towards the general is inherent in the nature of comedy. A too highly individualised picture would be felt to be exceptional and would therefore not be recognised as generally true by the ordinary audience; thus comedy would miss its principal effect of *corrigere ridendo*. So much must be said in order that Shaw's attack upon society may not be discounted as an essay in philosophic discussion merely, with no relation to actual life. One other feature should be noted: his characters, like those of Shakespeare, belong chiefly to the leisured and cultured classes.³ In *Back to Methuselah* we hear of a statue to Saint Henrik Ibsen, inscribed with the motto, "I came not to call sinners but the righteous to repentance," and a somewhat similar design is discoverable in the plays of Bernard Shaw. Even the historical characters may be made the mouth-pieces or the objects of his attack, for it is Shaw's avowed intention in writing drama with a historical background to bring out

¹ Collis, p. 108.

² *Laughter*, pp. 169—171. The whole passage has a direct bearing upon the plays of Bernard Shaw, and explains and partly justifies his contention that art (*i.e.*, his plays) should never be other than didactic. See Preface to *Pygmalion*, p. 102.

³ The reason for this is pointed out in the preface to *The Dark Lady of the Sonnets*, p. 128: "Industrial slavery is not compatible with that freedom of adventure, that personal refinement and intellectual culture, that scope of action, which the higher and subtler drama demands."

the elements of our common humanity in the great figures of the past. Human nature is always the same, and the romantic conventions of hero-worship are pure nonsense.¹

* * * * *

Any author has the right to claim that his work shall be judged from the particular aspect under which he wishes it chiefly to be regarded, and since Shaw considers his propaganda to be the most important feature of his plays, it will be worth while very briefly to examine his criticism of contemporary English society. The *raison d'être* for the attack which he makes upon existing conditions, institutions, creeds, conventions, and national idiosyncrasies is abundantly set forth in many passages of the plays, prefaces, and critical articles. As long ago as 1896, when he was working as dramatic critic for the *Saturday Review*, Shaw penned the

¹An exact classification of Shaw's plays is difficult if not impossible. Broadly speaking it may be said that the plays earlier than *Man and Superman* (1903) deal either with concrete social evils or with individual character while the later plays deal in a more abstract fashion with questions of politics, morals, and sociology. The multiplicity of Shaw's dramatic activities is shown by his own list of the subjects which he has treated in his plays. "I tried slum landlordism [*Widowers Houses*] doctrinaire free love (pseudo-Ibsenism) [*The Philanderer*] prostitution [*Mrs Warren's Profession*] militarism [*Arms and the Man*] marriage [*Getting Married*] history [*Cæsar and Cleopatra*] *The Man of Destiny* [*The Devil's Disciple*] *Androcles and the Lion* *Great Catherine* and (later) *Saint Joan*] current politics [*John Bull's Other Island*] natural Christianity [*The Shewing up of Blanco Posnet*] national and individual character [*Captain Brassbound's Conversion*] *You Never Can Tell* *Candida* *John Bull's Other Island*, *Fanny's First Play* [*Heartbreak House*], paradoxes of conventional society [*You Never Can Tell*, *Candida*, *Misalliance*] *Overruled* *Fanny's First Play* [*Heartbreak House*] husband hunting [*Man and Superman*] questions of conscience, [*The Devil's Disciple* *The Doctor's Dilemma* *Mrs. Warren's Profession* *Doctor's Dilemma* *Pygmalion*] all worked into a series of comedies of manners in the classic fashion which was then very much out of fashion, the mechanical tricks of Parisian "construction" being *de rigueur* in the theatre. — *Back to Methuselah* Preface, p. LXXIV. The additions in brackets are my own. This play which is a vision of Creative Evolution stands apart from the rest though they may all be said to be summed up in it.

following passage, which is of great importance for the right understanding not only of his own position but also of the whole trend of modern drama:—".....when conduct conflicts with creed, the question as to which of the two is in the wrong is an open one.....it is not alone humanity that is constantly on its trial, but the ethical, political, and religious systems that claim obedience from humanity.....a deliberate violation of these systems may be, not a weakness to be pitied and pardoned, but an assertion of human worth to be championed and carried to victory in the teeth of all constitutions, churches, principles, and ideals whatsoever.¹" And his plays are constructed in accordance with this principle. "An interesting play cannot in the nature of things mean anything but a play in which problems of conduct and character of personal importance to the audience are raised and suggestively discussed.²" "In the new plays, the drama arises through a conflict of unsettled ideals rather than through vulgar attachments, rapacities, generosities, resentments, ambitions, misunderstandings, oddities and so forth as to which no moral question is raised.³" "Unity, however, desirable in political agitations, is fatal to drama, since every drama must be the artistic presentation of a conflict. The end may be reconciliation or destruction; or, as in life itself, there may be no end; but the conflict is indispensable: no conflict, no drama."⁴ Shaw's plays are thus seen to be linked up with his pamphleteering and speeches, his socialistic tracts, and his economic disquisitions by virtue of an inborn desire for revolt.

Shaw's criticism of modern society centres principally around three or four points—economic questions, sexual relationships, marriage, the family, and religion. He declares that society as at present constituted is based upon a set of false

¹ *Dramatic Opinions and Essays*, Vol. I, p. 448.

² *The Quintessence of Ibsenism*, p. 190.

³ *Ibid.*, p. 194.

⁴ *Plays Pleasant*, Preface, p. vii.

romantic conventions to which he gives, somewhat arbitrarily the collective name of "idealism." He uses the term "ideal" much in the sense of "illusion," to denote a mask deliberately invented to disguise the inconvenient, brutal, and terrible things of life. The man who is brave enough to strip off the mask and look things in the face is the "realist." The whole of Ibsen's work is interpreted from this point of view, and it must be admitted that Shaw sometimes lays violent hands on Ibsen's plays in order to make them fit the theory. The realist, in Shaw's sense, is not Zola or De Maupassant, but Plato¹. In the preface to *Plays Pleasant* the question is dealt with at some length, and Shaw repudiates the assumption that because the realistic morality of his plays clashes with the romantic morality in vogue, he is therefore necessarily either a cold, calculating materialist or a wrecker of society. "I do not see moral chaos and anarchy as the alternative to romantic convention," he says², and even if he regards romance as "the great heresy to be swept off from art and life—as the food of modern pessimism and the bane of modern self-respect," it does not follow, as we have already seen, that he despises poetry, art, and imagination. Care, too, should be exercised in regard to his use of the term "immorality." When, in the famous *Rejected Statement* which so seriously disturbed the Parliamentary Committee set up to investigate the question of the Censorship, he describes himself as "a specialist in immoral and heretical plays," it is to be noted that on the very next page he defines "immoral" "whatever is contrary to established manners and customs. An immoral act or doctrine is not necessarily a sinful one on the contrary, every advance in thought and conduct is by definition immoral until it has converted the majority"³. These quotations will help to explain the fact to which attention has often been called, and sometimes

¹ Cp. *The Quintessence of Ibsenism* pp 19 ff.
Plays Pleasant Preface p xviii.

² *Ibid* p xiv

³ *The Shewing-up of Blanco Posnet* pp 318-9

with surprise, that Bernard Shaw, who in his plays appears to advocate the widest license in questions of sex, politics, and religion, is in private life an ordinary law-abiding citizen, a man, it is said, of great personal charm, and one against whose stainless, ascetic character none of his enemies has ever been able to breathe a word. There must always be "a large liberty to shock conventional people, and a well-informed sense of the value of originality, individuality, and eccentricity,"¹ and Shaw believes that the British public needs shocking pretty often and pretty thoroughly, "about three times a week on one subject or another," he says in a paper to the Academy.²

The picture of English society given in the plays is by no means a flattering one. Shaw believes that in our domestic and family relations, in our conventional ideas upon marriage and the position of woman, in our social and political organisation, in the Church, in the industrial system of England, there is much that is wrong and foolish, and he has laid his finger upon some undoubtedly weak spots in our social system. In the history of every country it has been necessary for some teacher to arise—a Rousseau, a Carlyle, a Tolstoi, a Bernard Shaw—to awake society to the necessity of revising the outworn codes and standards to which men are apt to cling long after the conditions under which they were first created have passed away, and there is much in his denunciations to which every intelligent English observer cannot but assent, even though it may not be necessary to concur whole-heartedly in the view that "we are very badly governed and are, on the whole, an ugly, mean, ill-bred race³." Two points in particular are emphasised: first, that a rigid adherence to an artificial and purely conventional standard of respectability has led, in the case of the bulk of the middle and upper classes of England, to a fairly complete

¹*Saint Joan*, preface, p. XLV.

²*The Solution of the Censorship Problem*, *The Academy*, June 29, 1907. Quoted by Howe, pp. 66-7.

³*Getting Married*, Preface, p. 142.

atrophy of the intellectual and artistic faculties,¹ and secondly, that the average English mind is essentially not that of an adult but of a child.² An Englishman's eating is "unhealthy," his drinking "intemperate," his smoking "filthy," his domesticity "licentious," his elections are "corrupt," his commerce is "murderously greedy," his prisons are "cruel," and his streets "merciless."³ This is a pretty wholesale indictment, but when all allowance has been made for whim and eccentricity, it must be admitted that a good deal in it is true. The play of *Heartbreak House* represents, not England alone this time but cultured leisured Europe before the war as a ship drifting upon the rocks, with the captain lying drinking in his bunk and vaguely trusting to Providence. But the clearest and most detailed exposition of Shaw's views is given in the famous passage of *The Man of Destiny*, too long to quote here, in which Napoleon "explains the English" to the Lady.⁴ This is of course a dramatic utterance, but it nevertheless strips the mask from some of our national hypocrisies and pretences with a masterly and powerful hand.

Of the social evils which Shaw attacks in his plays the most prominent are poverty, slum-landlordism, prostitution, capitalism, and the laws relating to crime and punishment.⁵ He is a whole-hearted follower of Butler and roundly denounces poverty as "the greatest of evils and the worst of crimes,"⁶ though not, of course, a personal crime. Undershaft has saved his daughter's soul because, being rich, he has been able to give

¹There is a delicious touch of satire in *Cæsar and Cleopatra* Act II (p. 138) where Britannus, Cæsar's British secretary is speaking "Blue is the color worn by all Britons of good standing. In war we stain our bodies blue so that though our enemies may strip us of our clothes and our lives, they cannot strip us of our respectability."

²Cp. *Back to Methuselah* pp. 128 and 134.

³*John Bull's Other Island* Preface for Politicians, p. xxxvii.

⁴*The Man of Destiny* pp. 200-1.

⁵All these questions are dealt with in Duffin's excellent summary of Shaw's ideas and general philosophy. See Bibliographical Note.

⁶*Major Barbara* p. 154.

her the luxuries of life, so that she can develop it. He has saved her from "the seven deadly sins, food, clothing, firing, rent, taxes, respectability, and children," which things are "millstones about man's neck."¹ Ellie Dunn, in *Heartbreak House*, makes the same point when she insists that her soul is an expensive thing to keep. "It eats music and pictures and books and mountains and lakes and beautiful things to wear and nice people to be with. In this country you can't have them without lots of money: that is why our souls are so horribly starved."² There is a truth in this that needs to be faced. The remedy Shaw proposes is an equal distribution of incomes and the insistence by the State that every man shall produce, by work of his own, an equivalent in value to the sum allotted him, with a surplus to allow for superannuation and the paying back of the costs incurred by his upbringing. His views on economic questions are perhaps most clearly set out in the preface to *Androcles and the Lion*. He has two finished studies of prostitutes, Mrs. Warren in the play which bears her name, and Dora in *Fanny's First Play*. The central thesis of *Mrs. Warren's Profession*, that "the only way for a woman to provide for herself decently is for her to be good to some man that can afford to be good to her,"³ is fortunately less easy to maintain to-day than it was at the time (1893) when this play was written, yet no one can fail to be struck by the painful truth and vividness of the characters which Shaw has drawn. The evils of the modern legal and judicial system in its application to crime and punishment are dealt with in the preface to *Androcles and the Lion*. Shaw objects, not so much to the laws themselves as to the spirit in which they are administered.

When we come to Shaw's views upon women and marriage, and the mutual relations of parents and children, we touch

¹ *Ibid.*, p. 281.

² *Heartbreak House*, p. 76.

³ *Mrs. Warren's Profession*, p. 197.

upon some of the cardinal features of his teaching and those for which he has been most bitterly attacked. Yet we should not allow our preconceived opinions and the romantic traditions in which we have been nurtured to blind us to the essential truth and sanity of his criticism. It cannot be too often repeated that Shaw too has his ideals (in the commonly accepted sense of the term), and that when we really probe to the bottom of his teaching we shall find that in essentials his views are entirely sane and reasonable, although at first sight the mode of their expression may seem paradoxical and absurd. He revolts, to begin with, against "the romantic convention that all women are angels when they are not devils, that they are better-looking than men, that their part in courtship is entirely passive, and that the human female form is the most beautiful object in nature." The play in which these ideas are most fully developed is *Man and Superman*, which is conceived as "a stage projection of the tragic-comic love chase of the man by the woman."¹ The main thesis of the play is that the Life Force (the *Élan Vital* of Bergson) manifests itself in the opposite sexes in different ways, in woman as the procreative instinct, in the artist man or man of genius as the passion for abstract creation. If, as sometimes happens, the matter is complicated by the fact that the person of genius is also a woman, the game becomes "one for a king of critics."² When Shaw wrote this play he was suffering from an acute attack of eugenics, and he proposes the abolition or at least the drastic modification of marriage as the solution of this and other difficult problems raised by the modern view of the relationship between the sexes. But the attack wore off and in the later play, *Getting Married*, which, with its preface, contains Shaw's fullest treatment of the subject (and is, incidentally, one of the most amusing of his plays), he admits that, society being what it is at

¹ Preface to *Major Barbara* p. 130

² *Man and Superman*, *Preface* p. xvi

³ *Ibid.* p. xix.

present, marriage is inevitable, and he turns his attention to the practical question of its reform. No very definite conclusion is reached, but one of the strongest points in Shaw's indictment of our marriage laws (now to some extent amended in this respect) is the impossibility of obtaining divorce for any other reason than adultery. The right to divorce, he maintains, ought to be free and unquestioned if either of the parties wishes it. In the Bishop's words, "unless the law of marriage (is) first made human, it (can) never become divine."¹ Several different views of marriage are given in this play. The Bishop and his wife are a happily married couple in the old-fashioned sense; Lesbia, a fastidious lady, wants children but objects to having to live in closest intimacy with a man as a necessary consequence; Edith claims her economic independence if she marries; Collins takes what might be called the sensible middle-class view of marriage itself, but suggests that, if the parties wish it, the marriage should be dissolved when all the children have grown up; the Bishop again prophesies that marriage, having long ago ceased to be a holy institution, will eventually give way to a deed of partnership. Shaw would insist, of course, that equal liberty in contracting and dissolving marriages should be given to both parties, and that the wife is entitled to claim a reasonable living wage for her work as mistress of the household. In his preface he advocates the State endowment of motherhood.

On the position of women in general Shaw has a good deal to say. An Indian, living in a country where (according to our Western ideas, at least) women have no rights at all, and regarding Western women, in all probability, as rather over than under-emancipated, may be surprised to find this dramatist declaring that the position of dependence to which women are reduced in England and the inequality of the laws regulating the relations between the sexes are a menace to

¹ *Getting Married*, p 235.

society. Shaw, however, lays too much stress upon the predominatingly maternal aspect of woman and here, as in some other matters, he allows his sociological enthusiasm to carry him too far. He has said recently that the reason for the success of his women characters lies in the fact that he has always assumed that women think and act precisely as he himself thinks and acts.¹ There is a certain truth in this, but the principle is a little dangerous for a dramatist. However, there is no denying the excellence of many of his studies of women, especially young women like Ann Whitfield, Elsie Dunn, Hypatia Tarleton, Edith Bridgenorth, Vivie Warren, Nora Rully, Margaret Knox, Barbara Under-shaft, Eliza Doolittle. In these young people and their corresponding male counterparts (though the studies of these are far less numerous) Shaw seems to place his hope for the future of the race. Their predominant qualities are coolness and courage, a direct and practical manner of facing the problems before them, and an amazing energy and vitality. Shaw's entire dramatic work is indeed a glorification of youth, and herein chiefly lies its constructive value.

The most trenchant criticism of English family life will be found in the play of *Misalliance* and its preface, though attacks in the same direction are not wanting in other plays.² Shaw has nothing to say against the conventional ideal of domestic happiness except that it is by no means inevitable and possibly not even common. He protests against the tyranny exercised by many parents over their children: the child has its own rights which even well-intentioned parents often completely ignore. Moreover, what we call "natural affection" is very largely a delusion: there should be nothing unnatural in the fact which has caused such sorrow to many a mother, namely that her child may prefer

¹ Collis, p. 111.

² e.g. *Plays Unpleasant* Preface p. xvn. *You Never Can Tell* Getting Married pp. 196 247 251, and Preface.

the company of its nurse or even of a stranger to that of herself. "Every child has a right to its own bent. It has a right to be a Plymouth Brother though its parents be convinced atheists. It has a right to dislike its mother or father or sister or brother or uncle or aunt if they are antipathetic to it. It has a right to find its own way and go its own way, whether that way seems wise or foolish to others, exactly as an adult has. *It has a right to privacy as to its own doings and its own affairs as much as if it were its own father.*"¹ Hypatia in this play is a carefully brought-up girl who revolts against the tediousness and inanity of a life spent in a round of sick-visiting and parties; her father, Tarleton, and his friend Lord Summerhays both, in different ways, feel the difficulties of parental responsibility. As Tarleton puts it, in a sentence which must have given many a parent pause, "I tell you there's a wall ten feet thick and ten miles high between parent and child."² The closely related question of the education of the young is also touched upon. Shaw has many hard things to say of the English public school and University system. It is true that like others (Mr. H. G. Wells, for instance) who have attacked the same system he sometimes criticises without full knowledge, but he is certainly in the right when he insists that the ordinary practical lessons of self-help and good citizenship should be more strongly inculcated than they are in the vast majority of our schools. The things which a child should be taught are those which will qualify it "to live in society without wasting other people's time,"³—a fairly comprehensive principle, when its meaning is fully worked out. Shaw's antipathy to scientific theories is well known, but unfortunately he often fails to distinguish between fads and genuine scientific facts.

His criticism of the Christian Church proceeds upon similar lines. Shaw himself is a man with a deep religious sense :

¹ *Misalliance*, Preface, p. xv (italics mine).

² *Misalliance*, p. 40.

³ *Misalliance*, Preface, p. xxxvii.

it is said that he attends church regularly, though he always chooses a time when no priest is present and there are no other worshippers. But he maintains, with truth, that Christianity has never yet been given a fair trial, the simple social and economic, as well as the spiritual, principles which it teaches having been rendered abortive by the establishment of a highly complex ecclesiastico-political system, which has used the organisation of the Church for its own ends. Moreover, Christianity, a religion of the East, has been perverted, largely unconsciously perhaps, into a kind of private monopoly of the European nations, to be leased out again upon their own terms to the other nations of the world. 'The test of a dogma is its universality. As long as the Church of England preaches a single doctrine that the Brahman, the Buddhist, the Mussulman, the Parsee, and all the other sectarians who are British subjects cannot accept, it has no legitimate place in the counsels of the British commonwealth.' He attacks the specific dogmas of the Anglican Church and the Church as an organisation, but he shows no hostility towards the clergy or other representatives of the Church, of whom several very favourable specimens appear in the play—Bridgenorth, Keegan, Major Barbara, Anderson, Rankin, Morell. He has a profound sense of the spiritual in man, and his religion is a belief in the Life Force which is ever impelling the universe towards a fuller and more perfect life. He is even prepared to call this Life Force God. But men must not cling stubbornly to outworn creeds. "That is what is wrong with the world at present. It scrapes its obsolete steam engines and dynamos, but it won't scrap its old prejudices and its old moralities and its old religions and its old political constitutions."¹ These sentences, written in 1905, explain Shaw's general attitude, although subsequent events have to some extent modified the force of their application.

¹*Back to Methuselah* Preface p. lxxv. Shaw's religious views are expressed mainly in this preface and in the preface and concluding note to *Androcles and the Lion*.

²*Major Barbara*, p. 280.

Other topics dealt with in the plays must be passed over with a bare mention. In three plays¹ he has touched upon the question of war, and though he does not appear to know very much about military organisation and tradition, his general objection to militarism is sound. During the late war, Shaw was one of the few people in England who did not lose their heads, and he suffered much unpopularity in consequence. His impatience of scientific theory finds vent in one of the most delightful of all his plays, *The Doctor's Dilemma*, where various medical theories are satirised in the persons of a group of doctors of contrasting types. As a vegetarian Shaw objects to vaccination, and as a humanitarian to vivisection and to "sport," but these antipathies are not intruded into the plays.

* * * * *

Wherein, then, lies the value of Shaw's criticism of society? Chiefly in the fact that he has clarified and braced our thinking. His plays are an intellectual tonic and it is not necessary to agree with all or any of his views in order to profit by his criticism. The element of sanity in the plays has been sufficiently insisted on, but it should not be forgotten that there is *vision* as well. Shaw's vision of the future of the race is proclaimed in *Back to Methuselah*, of that of the individual perhaps most clearly in *Man and Superman*, though it must be remembered that he would have every man a "superman," not one or two highly gifted individuals only. He insists upon the importance of instinct, and to follow instinct means for him the development of the individual not in and for himself, but in his relation to society. "We are to think and believe what we can, and do what nature prompts us to, but those things alone are worth thinking and doing which develop the individual, make the individual one with society, and urge society on towards its ultimate perfect form."² For Individualism, if it be sufficiently

¹*Arms and the Man*, *The Man of Destiny*, *Back to Methuselah*, part IV. See also the preface to *John Bull's Other Island*, pp. xxxviii ff.

²Duffin, p. 220.

sincere and intense, leaves no room for egotism. "When a man is at last brought face to face with himself by a brave Individualism, he finds himself face to face, not with an individual, but with a species, and knows that to save himself, he must save the race. He can have no life except a share in the life of the community and if that life is unhappy and squelch, nothing that he can do to paint and paper and upholster and shut off his little corner of it can really rescue him from it." Thus noble ideal of self-abnegation, the sinking of self in the race, is Bernard Shaw's message to his age.

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HINDU SYSTEM OF MEASUREMENT

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In the Śilpaśāstras the linear measurement is divided into six kinds, namely, *māna*, *pramāṇa*, *parimāṇa*, *lamba-māna*, *unmāna* and *upamāna*. The measurement from the foot to the top of the head is called *māna*. *Pramāṇa* is the measurement of breadth. *Parimāṇa* is the measurement of width or circumference. *Lamba-māna* is the measurement along the plumb-lines or the lines drawn perpendicularly through different parts of the body. *Unmāna* is the measurement of thickness or diameter. And *upamāna* is the measurement of interspace, such as that between the two feet of an image; this measurement is taken from one plumb-line to another. ¹

Of these sculptural measures *māna* or the measurement of height, when refers to an architectural object, is generally

- ¹ मानं चापि प्रमाणं च परिमाणं लम्बमानकम् ।
उन्मानमुपमानं च मानं पञ्च समीरितम् ।
पादाङ्गुलिससीमान्तं मानं चापि प्रकथ्यते ।
प्रमाणं विस्तृतं प्रोक्तं परितः परिमाणकम् ।
तत्सूत्रालम्बमानं स्यान्नम्नमुन्मानमुच्यते ।
अवान्तरोपमानं स्याद्विम्बोदयादिसर्वशः ।

(Mānasāra, LV. 3—8.)

Cf.

अतःपरं प्रवक्ष्यामि मानोन्मानं विशेषतः ।

(This is followed by the description of तालमान)

(Matsya-Purāṇa, chap. 258, v. 16.)

मानं तद्विस्तारं प्रोक्तमुन्मानं नाहमेव च ।

(Suprabhedāgama, XXXIV, 35.)

called *utsedha*. It is indicated by five proportions and is technically known as *sāntika*, *paushtika*, *jayada*, *sarva-lāmika* or *dhanada*, and *adbhuta*. *Sāntika* is that which is peaceful, in this proportion the height of a building is equal to its breadth, and this is a graceful proportion. *Paushtika* is that which is at once strong, eminent, rich, complete and perfect, in this proportion the height is $1\frac{1}{2}$ of the breadth, and this gives the building a good stability, eminence and perfection. *Jayada* is that which gives joy, in this proportion the height is $1\frac{1}{3}$ of the breadth, and this gives a pleasing appearance to a building. *Sarva lāmika* is that which fulfils all desires, it is otherwise called *dhanada* or wealth-giving. In this proportion the height is $1\frac{1}{2}$ of the breadth, and this is intended to make a building strong as well as beautiful. *Adbhuta* is that which is marvellous, in this proportion the height is twice the breadth, and this gives a wonderful loveliness and gorgeous look to a building.

The comparative heights of the component members of an architectural object generally and a sculptural object in special cases are known as *ganya-māna*.¹ When exclusively applied to images, it is called *tāla māna*.² But when the height of

परिमाणोन्मातमान धार्यं शतविमुदितम् ।

गुणसाधनसंज्ञया भवन्ति त्रिसृणा जना ॥

(Professor Benoy Kumar Sarkar's translation of परिमाण by standard measurement for lands, जमान by unit of measurement for liquids and मान by unit of measurement for grains is untenable.)

(Śukra nītiśāra ed Oppert, I 310)

१ तद्विस्तारसमोत्तुङ्ग सपादायं तु गुह्यम् ।

त्रिपादाधिकमुत्सेध विस्तार द्विगुणोदयम् ।

प्रथम स्थानिकोत्सेध द्वितीय पीष्टिकोदयम् ।

तृतीय जयदोत्तुङ्ग चतुर्थ धनदोदयम् ।

पञ्चम आद्भुतोत्सेध जन्मादि रूपिकान्तकम् ।

¹ See Manasara, XIII 36—40 XXVII 36—40 XXIX 35—48
XXXIII 134—145 216—217 248 XLV 86 97—101 LIII 29—34 etc.
² See pp 46—48

an image is determined by comparing it with some other objects, it is called *ādimāna* or primary measurement.

There is another kind of measure taken by the exterior and the interior of a structure. It is called *ghana-māna* when the measurement is taken by the exterior, and *aghana-māna* when taken by the interior.¹

The *ādimāna* or the primary measurement is divided into nine kinds as the height of an image is determined by comparing it with (i) the breadth of the main temple, (ii) the height of the adytum or sanctuary, (iii) the length of the door, (iv) the dimension of the basement, (v) the height of the worshipper, (vi) the height of the riding-animal of the deity, (vii) in accordance with the *tāla-māna*, and in (viii) cubit and (ix) *āṅgula*² (finger breadth).

Each of these nine measures is again divided into nine kinds, apart from the three divisions in accordance with the sizes, namely, large, intermediate, and small.³

The proportions under i—iv naturally vary in accordance with the variation of the objects mentioned thereunder. Under these heads no general rule has, therefore, been prescribed.

¹ योगादि घनमानं च कृत्वा बाह्ये नवांशकम् ।

(Mānasāra, XXXIX 65.)

एवं तद्घनमानमुक्तमघनं वक्ष्यतेऽधुना ।

(*Ibid.*, XXXIII. 330, see for context 291—329, 331 f.)

² आदि मानविधिं सम्यग्लक्षणं च ब्रूह्यते ।

हर्म्यतारवशान्मानं गर्भगृहवशोदयम् ।

द्वारमानवशात्तुङ्गमधिष्ठानवशोदयम् ।

हस्तमानवशान्मानं तालमानवशोदयम् ।

अङ्गुलेनापि चोत्तुङ्गं यजमानवशोदयम् ।

मूलवेरवशान्मानमुत्तमादि त्रयं त्रयम् ।

(Mānasāra, LV. 10—15.)

³ तस्मादेकं तु प्रत्येकं नवमानमिहोच्यते ।

.....उत्तमादि त्रयं त्रयम् ।

(Mānasāra, LV. 22, 15.)

The height of the image, when compared with the height of the worshipping, admits of nine kinds. It may be equal to the full height of the worshipper, may extend up to his knee-joint on the forehead or the eye-line, nose-tip, chin, arm-joint, breast, heart, navel, and the sex-organ.¹

The height of the image, when compared with the height of its riding-animal, admits of the same nine kinds as in the case of the worshipper's height. But in case of the riding-animal the height is further divided into *utsarodaya* and *kautukodaya*, the latter being half of the former.² The *utsarodaya* is also measured by the angular or finger-breadth of the idol.³

In the *tāla-māna* the face including the head is stated to be the unit of measurement.⁴ But *tāla* is the technical name for the distance between the tips of the fully stretched

- ¹ कन्यमादुत्तमान्तं स्वाद्यजमानादप्यपरम् ।
 कशान्तं नासिकाग्रान्तं हन्वान्तं शङ्खुसीमकम् ।
 खनान्तं हृदयान्तं च नाभ्यन्तं मेदूसीमकम् ।
 नवपा कन्यसान्तं स्वास्थ्यावरजसमीदृशम् ।

(Manasāra, LV 30-33)

- ² मूत्रवेरवशात्कौलमुत्तमोदवर्गमितम् ।
 तदर्थं कौतुकोत्तमं कन्यसादि त्रयं त्रयम् ।

(Manasāra, LV 34 LXI 23)

- एव किञ्चिदवशात्कौलमुत्तमोदवर्गमितम् ।
 मूत्रवेरवशात्कौलमुत्तमोदवर्गमितम् ।
 हन्वान्तं शङ्खुसीमान्तं खनान्तं हृदयान्तकम् ।
 नाभ्यन्तं मेदूसीमान्तं नवमानं स्वास्थ्योदपम् ।
 तदर्थं कौतुकोत्तमं कन्यसादि त्रयं त्रयम् ।

(Manasāra LXIV 24-28 see also LXIV 91-93 LXI 1-5
 LXII 1-3 9 10 LXIV 27 23 LV 35 36 37 46)

- ³ मूत्रवेरवशात्कौलमुत्तमोदवर्गमितम् ।
 तत्तन्मानवशात्कौलमुत्तमोदवर्गमितम् ।
 तत्तन्मानवशात्कौलमुत्तमोदवर्गमितम् ।

(Manasāra, LV 35 LXI 21 22)

- ⁴ मुखमानेन कर्तव्या सवाक्यकल्पना ।

(Matsya Purana, chap 258 v 19)

thumb and middle finger.¹ In this system of measurement, the height of an image is determined in accordance with this unit. Thus an image is of eight-tāla measure when its whole height is eight times its face, and of seven-tāla measure when the height is seven times the face, and so forth.

The face which is the unit of measurement in this system is itself measured in aṅgula or finger-breadth. Thus it is stated, without any specification of any tāla-māna, both in the Matsya-Purāṇa, and the Brihat-Samhitā that according to one's own aṅgula (finger-breadth) the face of his own statue is twelve aṅgulas (nine inches) broad and long; but the latter authority adds that according to the architect Nagnajit the face should be (twelve aṅgulas broad and) fourteen aṅgulas long in the Drāviḍa style.² The Suprabhedāgama has, however, specified the particular tāla-māna in measuring the face. According to this authority, in the large type of ten-tāla the face should be $13\frac{1}{2}$ aṅgulas, in the intermediate type 13 aṅgulas and in the small type $12\frac{1}{2}$ aṅgulas; in the large type of nine-tāla the face should be 12 aṅgulas, in the intermediate type $11\frac{1}{2}$ aṅgulas, and in the small type 11 aṅgulas, and so forth.³ In the

¹ तालो स्मृतो मध्यमया गोकर्णश्चाप्यनामया ।

(Brahmāṇḍa-Purāṇa, part 1, Anusaṅgapāda 2, chap. 7, v. 97.)
मध्यमाङ्गुलसंयुक्तं तालमानमिति स्मृतम् ।

(Suprabhedāgama, XXX. 22.)

² स्वकीयाङ्गुलिमानेन मुखं स्याद्द्वादशाङ्गुलम् ।

(Matsya-Purāṇa, chap. 258, v. 19)

स्वैरङ्गुलप्रमाणैर्द्वादशविस्तीर्णमायतं च मुखम् ।

नग्नजिता तु चतुर्दश दैर्घ्येण द्राविडं कथितम् ।

(Brihat-Samhitā, LVIII. 4.)

The commentary quotes Nagnajit in full :

विस्तीर्णं द्वादशमुखं दैर्घ्येण च चतुर्दश ।

श्रङ्गुलानि तथा कार्यं तन्मानं द्राविडं स्मृतम् ।

³ त्रयोदशार्धं मुखं ज्येष्ठं त्रयोदशं तु मध्यमम् ।

तद्द्वादशार्धमधममुत्तमदशतालके ॥

नवतालोत्तमे चैव मुखं वै द्वादशाङ्गुलम् ।

श्रधार्धाङ्गुलहीनेन मध्यमाधममुच्यते ॥

(Suprabhedāgama, XXXIV. 35—37.)

Mūnasāra the measure of the face together with its different parts is given separately in all the ten varieties, namely, one to ten tāla systems¹

The Bimbamāna has reference to twelve kinds of tāla-māna, each of which is again subdivided into three types, namely, large, intermediate and small. According to this authority the system of one tāla is used for measuring the Vāndukas (probably some insects or reptiles), two tāla for birds, three tāla for kinnaras (mythical beings with human body and horse's head), four tāla for goblins (bhūta), five tāla for Ganeśa (a deity with human body and elephant's head), six tāla for tigers, seven tāla for yakshas (demi-gods), eight tāla for man (male and female), nine tāla for demons (dīnava), ten tāla for superhuman beings and Buddha, eleven tāla for gods, and twelve tāla for fiends (rākshasa)². According to the Suprabhedāgama the deities forming the Triad are measured in the three (large, intermediate and small) types of the ten-tāla system, other gods as well as the female deities in the nine-tāla, divine beings, sages and men in the eight-tāla, fiends and demons (rākshasa and asura) in the seven-tāla, heavenly musicians (gandharva) in the six-tāla, the deity with human body and elephant's head (Vighnaka, i.e., Ganesa) and Vāmana (dwarf Vishnu) in the five-tāla, goblins (bhūta) in the four-tāla, beings with human body and horse's head (kinnara) in the three-tāla, fish in the two-tāla, other smaller beings and Kūsh-mānda (wife of Śiva) in the one-tāla, and pisācha (evil spirit) is stated to be of twenty angulas³. The Amsumadbhedā of

¹ See pp 49—68

² Bimbamāna (British Museum Mus no 558-5 292 Appendix)

The details of the large type of ten tāla system plumb-lines and the horizontal measure of an idol and the measures when the idol is made in the sitting and the recumbent postures are described (*ibid* v 71 72 73—91 92—135)

For details see Manasara below

³ इन्द्रादिचतुर्भूतिं दशतलेन कायेत् ॥
शचीनामन्यदेवानां नवतलेन प्रकीर्तितम् ।

Kāśyapa also has described the different varieties of the tāla-māna, but the objects measured in the systems are not clearly specified. ¹

In the Mānasāra the details of all the ten or rather nine tāla-māna, together with the different objects measured in these systems, are described elaborately and may be translated in full.

The largest type of the two-tāla system in which the goose, the riding-animal of Brahmā, is measured (M. LX. 6—35):

1.	Height of head ...	4 parts.
2-3.	„ „ neck ...	8
4.	Height (length) of heart (chest)	11
5.	(Below this) height of thigh ...	1 $\frac{3}{4}$
6.	Height of knee ...	1
7.	Length of leg ...	1 $\frac{3}{4}$
8.	Height of foot ...	1
9.	Breadth of face ...	3
10.	At the back of the head ...	2
11.	Length of face ...	4

दिव्यमार्पमनुप्याणामष्टतालेन कारयेत् ।
 रत्नसामसुराणां च सप्ततालेनेहोच्यते ।
 षट्तालेनैव गन्धर्वान्पञ्चतालेन विभक्तम् ॥
 वामनात् (वामनं) पञ्चतालैस्तु चतुस्तालैस्तु भूतकान् ।
 त्रितालं किन्नराणां तु मत्स्यानां तु द्वितालकम् ॥
 एकतालस्तु कुम्भाण्डात् (?) पिशाचा विंशदङ्गुलाः ।
 स्थूलसूक्ष्मप्रभेदास्तु तालभेदमिहोच्यते ॥

In a slightly different way :

त्रिविधदशतालेन त्रिमूर्तीनां तु कीर्तिताः ॥

.....

अनुजां तथैकं स्यात्पिशाचानां तु विंशतिः ॥

(Suprabhelāgama, XXX. 30—34 ; XXXIV. 37—40.)

This authority has also referred to the ten tāla systems but not in detail (*ibid.*, XXX. 3—40).

¹ Amśumadbhedā of Kāśyapa (Ms., see reference in the Catalogue of Eggeling, 3012, fol. 251 f.).

12	Neck at the root	1 part.
	It tapers from bottom to top and is furnished with two faces (beaks)	
13	Length of belly (kuk-chu)	8 parts.
14	Place of the stomach (udara-sthāna)	8
15	From the belly to the root of the tail	16
16	Breadth of wing	5
17	Length of wing	8
18	Height of wing	2
19	" " wing at the edge (agra)	1
20	Thickness of wing	1
21	Length of arm (bāhu)	8
22	Elbow	1
23	Width at the forepart of the head	6
24	" " root of the perfectly round thigh	2½
25	Breadth at the forepart	1½
26	" of knee	½
27	" " leg	1
28	" " sole (palm)	2
29	" " middle-finger at the forepart	4
30	Each of two fingers on either side	2
31	Length of face	3
32	Breadth of face	1
33	Length of eye and its breadth should be proportionate.	½
34	Distance between the eye-line and ear-line	2 yavas.
35	The crest above the head	2 or 1 part.
36	Its width ending by the back of head	6 parts.
37	Its breadth	4

And the rest is left to the discretion of the artist :

Śeṣaṁ yuktyā prayojayet (35).

In the seven-tāla system the whole height is divided into 84 equal parts which are distributed as follows:

1.	Crown of the head (mūrdhni) ...	2 parts.
2.	Face... ..	10
3.	Neck	3
4.	(From neck to) heart ..	10
5.	(From heart to) navel ...	10
6.	(From navel to) sex-organ ...	5
7.	Śuraga (? suraṅga, the hole) pīṭhāṁśa (?)	
8.	Thigh (ūru)	3
9.	Knee (jānu) ..	3
10.	Leg (pāda) .	3
11.	Length of arm	20
12.	Elbow	1½
13.	Fore-arm (prakosṭha) ...	16
14.	Palm (including finger) ...	8
15.	Foot	11
16.	Breadth of the face .	7
17.	Width of the neck... ..	5
18.	„ at the arm-joint ...	5
19.	„ of the chest between arm-pits	14
20.	„ by heart	12
21.	„ „ mid-belly ...	16
22.	„ „ loins (kaṭi) ...	12
23.	„ of thigh	8
24.	„ „ knee	5
25.	„ „ leg (jaṅghā)... ..	4
26.	„ at the ankle :..	3
27.	„ of the sole	4
28.	„ „ the forepart of arm ...	4
29.	„ „ fore-arm	4½
30.	Wrist	1

31	Width of palm	$3\frac{1}{2}$ and	
	length		4 parts.
32	Length of finger		1 part.

In the eight-tāla system the whole length is divided into 96 equal parts which are distributed as follows

1	Head from the crown (ashhishā)		
	to the end of the hair on the forehead		3 parts
2.	Thence to face (up to the chin)		$10\frac{1}{2}$
3	Thence to neck		1
4.	" " heart		$10\frac{1}{2}$
5	" " navel		$10\frac{1}{2}$
6	" the mid-belly (up to sex-organ)		$10\frac{1}{2}$
7	The thigh (below sex-organ to knee)		21
8	Knee		3
9	Leg .		21
10	Foot (height)		3
11	Length of foot		14
12	Breadth of face		9
13	Width of neck		6
14	Shoulder (up to arm-joint)		$4\frac{1}{2}$ (3 & $1\frac{1}{2}$)
15	Width at the root of arm		6
16	Length of arm		21
17	Elbow		$1\frac{1}{2}$
18.	(From elbow) forearm, (half of face)		$5\frac{1}{2}$
19	Palm including finger (equal to face)		$10\frac{1}{2}$

The rest should be as before.

In the largest type of the nine-tāla system the whole length is divided into 112 equal parts (M. LIX 14—64)

1	Crown (head proper)	4 parts.
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Face 12	2.	(Thence) forehead (up to the eye-line)	4 parts.
	3.	Thence to tip of nose	4
	4.	Thence to chin	4
	5.	Neck	...	...	4
	6.	Thence to heart	...	..	12
	7.	„ „ navel	...	...	12
	8.	„ „ sex-organ	...	...	12
	9.	Thigh (twice the face)	..	...	24
	10.	Knee (=neck)	...	...	4
	11.	Leg (=thigh)	...	...	24
	12.	Foot (=knee)	...	...	4
	13.	Palm (from thumb to forefinger)	16		
	14.	Arm	...	...	24
	15.	Elbow	...	...	2
	16.	Forearm	...	...	12
	17.	Palm (up to the tip of middle finger)	...	...	12
	18.	Breadth of face	...	...	11
	19.	Width of neck	...	...	8
	20.	„ round the arm-joint	...	...	8
	21.	„ of knee	...	...	8
	22.	Shoulder	...	...	5
	23.	Chest between the arm-pits	...	...	20
	24.	Width (breadth) at the mid-belly	...	...	15
	25.	Width at buttocks	...	...	17
	26.	„ of the loins	...	...	19
	27.	„ at the root of the thigh	10 $\frac{1}{2}$		
	28.	„ „ „ leg	...	...	7 $\frac{1}{2}$
	29.	„ „ middle of the leg	6		
	30.	Breadth at the „ „	...	...	4
	31.	Knee-tube	...	..	1 $\frac{3}{4}$
	32.	Ankle	...	...	1 $\frac{3}{4}$
	33.	Heel-breadth	...	...	4 $\frac{1}{2}$

34	Breadth of prapada (fore-part of the foot)	17(?) parts
35	Breadth of the palm (? sole)	5
36	Length of the largest toe	4
37	Breadth " "	2
Breadth of nails is half of their length.		
38	Length of fore-toe (=thumb)	4
39	Breadth " "	1 (? 2)
40	Middle toe	3 (breadth 7 yavas)
41	Fourth toe	2½ (breadth 6 yavas)
42	Little toe	2 (breadth 5 yavas)
Breadth of nails is half the breadth of the fingers.		
43	Width at the middle of the arm	7
44	Width at the elbow	7
45	" " forearm	4
46	" " wrist	3
47	Breadth at the root of the palm	6
48	" " fore-part of the palm	4
49	Length of the palm	6
and the remainder is the middle finger (?)		
50	Fore-finger	3½
51	Ring-finger	3½
52	Little finger	3½
53	Breadth of thumb	1
54	" fore-finger	6 yavas.
55	" middle finger	7 "
56	" ring finger	6 "
57	" little finger	4 "

Fingers are made tapering from root towards the tip. The fore-part of the nails is $\frac{1}{2}$ or $\frac{1}{4}$ more than their length, and their breadth at the tip is one, two, or three yavas. The thumb is divided into two parts (parvaṇ) and the other fingers into three parts

(parvan). The line of wisdom and such other lines are drawn on the palm.

The eye-brow should extend from the eye-line to the hair (near the ear).

58.	Length of eye	..	2 parts.
59.	Breadth of eye	...	1
60.	Length of ear	...	4
61.	Drum of ear	...	4
62.	Breadth of ear	...	2

The rest should be as in the (uttama) daśa-tāla system :
Navatālottamaṁ proktaṁ śeṣaṁ cha daśa-
tālavat (64).

In the intermediate type of the nine-tāla system the whole length is divided into 108 equal parts :

1.	Head	...	3 parts.
2.	Neck	...	3
3.	Knee	...	3
4.	Foot	...	3
5.	Face	...	12
6.	Chest	...	12
7.	Belly	...	12
8.	Loins	...	12
9.	Thigh	...	24
10.	Leg	...	24
11.	Arm	...	24
12.	(From arm) forearm (including middle finger)	...	18
13.	Largest toe (up to heel, is equal to face)	...	12
14.	Foot	...	15

The rest should be discreetly made.

In the smallest type of the ten-tāla system the whole height is divided into 116 equal parts (M. LIX 67—100) :

1.	Head (from crown to hair in the forehead)	...	4 parts.
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Face 12	2	Thence to the eye-line (i.e., forehead)	4½ parts
	3	Thence to the tip of the nose	4
	4	Thence to the chin	3½
	5	Neck-joint	1½ (?)
	6	Neck	4
	7	Thence to heart	12
	8	Thence to navel	12
	9	Thence to sex-organ	12
	10	Thigh (from below sex-organ)	25
	11	Knee	4
	12	Leg	25
	13	Foot	4
	14	Length of foot from heel to largest toe	16½
	15	Length of arm below the line of hiccough	25
	16	„ elbow	2
	17	„ forearm	19
	18	„ palm (up to the up of middle finger)	12½
	19	Breadth of face	11½
	20	Width of neck	8½
	21	„ arm	8½
	22	„ knee	8½
	23	„ arm by root, elbow, wrist	6, 6, 1½
	24	(Length of) shoulder	20½
	25	Width of the mid-belly	15½
	26	„ the buttocks	18½
	27	Breadth of the loins	10
	28	Width at the root of thigh	12½
	29	„ of the knee (-cap)	6½
	30	Breadth or width of knee-tube	4
	31	„ of ankle	5

32.	Prapada (tip of the toes)	...	6 parts.
33.	Length of largest toe	...	4
34.	„ fore-toe	...	4
35.	„ other toes (half a part less)	... ..	$3\frac{1}{2}$
and their breadth or width is the same (? half of their length).			
36.	Breadth of elbow	...	$6\frac{1}{2}$
37.	„ forearm	...	5
38.	Breadth of wrist...	...	4
39.	„ palm	...	5
40.	Length of palm ...	...	7
41.	„ middle-finger	...	$5\frac{1}{2}$
42.	„ fore-finger	...	5
43.	„ of ring-finger	...	5
44.	„ little-finger	...	$4\frac{1}{2}$
45.	„ thumb	...	$4\frac{1}{2}$
46.	„ ear	...	$4\frac{1}{2}$
47.	Height of ear-drum	...	$4\frac{1}{2}$

The rest not specified here should be as in case of the largest type of ten-tāla system.

In the intermediate type of the ten-tāla system the whole height of the image (of a female deity) is divided into 120 equal parts (M. LXVI. 2—78):

1.	Head (from crown to hair on the forehead)	... ..	4 parts.
2.	Forehead (up to eye-line)	...	5
3.	Nose (up to the tip)	...	4
4.	Thence to chin ...	...	$3\frac{1}{2}$
5.	Neck-joint ...	...	$\frac{1}{2}$
6.	Neck ...	...	4
7.	From hiccough to heart	...	13
8.	Thence to the limit of navel	...	13
9.	Thence to sex-organ	...	13
10.	Thigh below sex-organ	...	26

11	Knee	4 parts.
12	Leg	26
13	Foot	1
14	Length of foot (from heel to the tip of largest toe)	16
15	Length of arm below the line of hiccough	26
16	Elbow	2
17	Forearm	20
18	Palm (up to the tip of middle-finger)	13
19	Middle-finger and palm proper the remainder	6 7
20	Thumb	4
21	Fore-finger	5½
22	Ring-finger	5½
23	Little-finger	4
24	Breadth of face up to ear	12
25	" " (below this) from ear to ear	11
26	Breadth of neck (at root, middle and top)	7
27	Breadth of chest (between arm-pits)	15
28	Width of each breast	9½
29	Height of breast	4½
30	Distance between breasts (nipples)	1
31	Width of the nipple	2
32	Breadth (below the breasts) by the heart	13
33	Width of mid-belly	11
34	Breadth (below this) by the navel	13
35	Breadth (of lower belly) below navel	15
36	Width of buttocks	20

37.	Width of loin	...	...	24 parts.
38.	Width at the root of each thigh	...	...	13
39.	Width by the mid-thigh	...	...	12
40.	Width at the fore-part of the thigh	...	...	9
41.	Width of knee	...	...	7
42.	Width at the root of leg	...	...	6
43.	Width at the mid-leg	...	...	5
44.	Breadth of knee-tube	...	...	4
45.	„ ankle	...	...	$4\frac{1}{2}$
46.	Width of sole	...	...	4
47.	Breadth of sole at the fore-part	...	...	5
48.	Breadth of heel	...	...	4
49.	Length of largest toe	...	...	4
50.	„ fore-toe	...	...	4
51.	„ middle toe	...	...	$3\frac{1}{2}$
52.	„ fourth toe	...	...	3
53.	„ little toe	...	...	2
54.	Width (breadth) of largest toe	...	...	2
55.	„ „ fore-toe 1 part =	...	...	8 yavas.
56.	„ „ middle toe	...	...	7 „
57.	„ „ fourth toe	...	...	6 „
58.	„ „ little toe	...	...	5 „
59.	Width at the root of arm is 3 and width of knee	...	...	10 parts.
60.	Width at mid-arm	...	...	$6\frac{1}{2}$
61.	„ „ fore part of arm	...	...	6
62.	„ „ elbow	...	...	$5\frac{1}{2}$
63.	„ „ root of forearm	...	...	5
64.	„ „ middle of forearm	...	...	$4\frac{1}{2}$
65.	„ „ fore-part of forearm	...	...	4
66.	„ „ wrist	...	...	3
67.	Width (breadth) of the palm (from thumb to little finger)	...	...	5

68	Width (at the root) of the fore-finger	6 yavas.
69	Width (at the root) of ring-finger (same)	6 "
70	Width (at the root) of little-finger	5½ "
71	Width (at the root) of middle finger	7 "
	Eye-brows are placed between forehead and eye.	
72	Breadth of eye	1 part.
73	Length of eye	3 parts.
74	Breadth of nose up to end of the tip	2
75	Width of nose at the middle	1 part.
76	" " at the root	½
77	Distance between the eyes	1½
78	" " " eye-brows	1
79	Length of eye-brow	9 parts.
80	Breadth of eye-brow	2
The interior of the eye is divided into three (equal) parts (as before), of which the black sphere is one part, the rest of the details is stated to be found in the list of the largest type of the ten-tāla system.		
81	Breadth and height of nostril (each)	½ part.
82	Width of face (up to the corner)	4 parts.
83	Width of upper lip	5 yavas.
84	Width of lower lip	6 "
85	Length of lip	2 parts
86	Ear=mid-eye-brow	(?)
87	Height of ear	4
88	Length of the drum of ear	4
89	Thickness (of the drum of ear)	½
90	Width of sex-organ	4
91	Length of sex-organ	7

92. Upper-breadth of sex-organ (is
equal to length)... 7 parts.

The rest should be as in the case of the largest
type of the ten-tāla system.

In the largest type of the ten-tāla system the whole height
of a male person (god) is divided into 124 equal parts (M. LXV.
2—179):

- | | | | |
|--|-----|-----|-----------------|
| 1. Head (from crown to hair on the forehead) | ... | ... | 4 parts. |
| 2. Face (from hair on the forehead to chin) | ... | ... | 13 |
| 3. Neck... | ... | ... | $4\frac{1}{2}$ |
| 4. Neck to heart (chest) | ... | ... | $13\frac{1}{2}$ |
| 5. Heart to navel | ... | ... | $13\frac{1}{2}$ |
| 6. Navel to sex-organ | ... | ... | $13\frac{1}{2}$ |
| 7. Thigh from below sex-organ | ... | ... | 27 |
| 8. Knee | ... | ... | 4 |
| 9. Leg | ... | ... | 27 |
| 10. Foot | ... | ... | 4 |

The length of face is divided into three parts, head to
eye-line, eye-line to lip-line, lip-line to hiccough-line.

- | | | |
|---|-----|-----------------|
| 11. Length of arm from (below the line of) hiccough | ... | 27 |
| 12. Elbow | ... | 2 |
| 13. Forearm (extending to wrist-joint) | ... | 21 |
| 14. Length of palm (up to the tip of middle-finger) | ... | $13\frac{1}{2}$ |
| a. Palm proper | ... | 7 |
| b. Middle-finger | ... | $6\frac{1}{2}$ |
| 15. Length of foot | ... | 17 |
| 16. Largest toe (from heel) | ... | $4\frac{1}{4}$ |
| Its breadth | ... | $2\frac{1}{8}$ |
| Its nail | ... | $1\frac{1}{16}$ |
| Breadth of nail | ... | $\frac{3}{4}$ |

The nail is made circular and its fore-edge is
fleshy and one part in extent.

17	Fore-toe	1 parts less one yava.
	Its breadth	1 part and 1 yava.
18	Middle toe	$3\frac{1}{2}$ parts.
	Its breadth	$1\frac{1}{2}$
19	Fourth toe	3 parts plus one yava.
	Its breadth	1 part minus one yava.
20	Little toe	$1\frac{1}{2}$ parts.
	Its breadth	$\frac{1}{2}$ parts plus 1 yava.
	Their nails are half of their respective breadths	
21	The middle line from ankle to the tip of sole	8 parts and 6 yavas.
22	From this line to the root of heel	1 parts.
	Breadth of heel	5 parts and 1 yava.
23	From side to heel	$3\frac{1}{2}$ parts.
24	Root of heel	6
25	Width of mid-sole (below ankle)	6 parts and 6 yavas.
26	Breadth of sole (at the fore-part)	6 parts.
27	Its thickness	3
28	Height of the mid-foot	$4\frac{1}{2}$
	The toes have two parts.	
29	Breadth of ankle	$5\frac{1}{4}$
30	" the tube (above)	$4\frac{1}{2}$
31	Breadth at the middle of leg	$6\frac{1}{2}$
32	Width at the root of leg	8

33.	Width of knee ...	9 parts.
34.	„ mid-thigh ...	12
35.	Width at the root of thigh ...	$13\frac{1}{2}$
36.	Width of loins ...	20
37.	„ buttocks (above) ...	$18\frac{1}{2}$ (?)
38.	„ mid-belly ...	$18\frac{1}{2}$
39.	Width at the heart ...	16
40.	„ by the chest ...	$18\frac{1}{2}$
41.	Distance between the arm-pits	21
42.	Breadth above this ...	22
43.	„ between the arms ...	$24\frac{1}{2}$
44.	Breadth of neck ...	9
45.	„ face in its fore-part	12
46.	Breadth of head by the hair on the forehead ...	10

From the hair on the forehead to the eye-line there are two (equal) parts, one of which is the forehead, and the remainder is the eye-part.

Between the forehead and the eyes, the places for eye-brows are left.

47.	Length of eye-brow ...	5
48.	Breadth „ ...	$2\frac{1}{2}$

The breadth at the middle is half of this and the brows taper from root to the other end.

49.	Distance between two brows ...	$\frac{1}{4}$ part 6 yavas.
-----	--------------------------------	--------------------------------

50.	Length of eye ...	3 parts.
51.	Breadth of eye ...	1 part.
52.	Distance between two eyes ...	2 parts.

The interior of the eye is divided into three parts, of which the black sphere is one part and the remainder is the white sphere. The shiny sphere within the black sphere is one part. The sight (retina) proper is situated within the shiny sphere. The upper

and lower coverings (hds) of the interior of the eye are each two parts.

The eyes are shaped like the fish and the brows like a bow

53	Length of ear	$\frac{4}{1}$ parts.
54	Drum of ear	$4\frac{1}{2}$
55	Fore-part of ear (= mid-brow)	$1\frac{1}{4}$
56	Ear-hole, its length and breadth	2 and 1
57	Distance between the drums	2
58	Thickness (befitting the ear)	1
59	Breadth of ear	$2\frac{1}{2}$
	The rest is left to the choice of the skilful	
60	Distance from eye to ear	7
61	Width of nose	$2\frac{1}{2}$
62	Tip of "	1
63	Breadth of nostril	$\frac{1}{2}$
64	Length of nostril	6 yavas.
65	Hole of nostril	$\frac{1}{2}$ part.
66	Its breadth	5 yavas.
67	Height of nose-tip (pushkara or four-faced part)	1 part.
68	Breadth of nose-tip	2 parts
69	Breadth of the middle of nose	3
70	" at the root of nose	$1\frac{1}{2}$
71	Height of nose	$1\frac{1}{2}$
72	Height of nose (from goji to tip)	2
73	Tip (below goji)	4 yavas.
74	Drp	1 yava.
75	Breadth	3 yavas
76	Circumference (above this)	1 yava
77	Breadth of upper lip below this	6 yavas.
78	Lower lip	1 part.
79	Width of upper lip	4 parts.
80	Length of crescent-shaped lower lip	$3\frac{1}{2}$

81. Three-faced part (trivaktra)
length and breadth each ... 2 parts.
82. Circumference (above) ... 2
- Teeth numbering 32 are in both lower and upper jaws.
83. Chin below the lower lip ... 1
84. Length of jaw ... 3 $\frac{1}{2}$
85. From this (jaw) to ear-joint ... 10
86. Height of drip between the jaws 1
87. Breadth of semi-circular jaw ... 1 $\frac{3}{4}$
88. Goji (tip) from jaw ... 1 part and
2 yavas.
89. Mid-neck (from jaw to its root) 2 parts.
90. Its projection ... 1
91. The eye on the forehead (third
eye) ... $\frac{1}{2}$ or $\frac{3}{4}$ of
other eyes.

There should be 98 eye-lashes; the hairs on the neck and face should be discreetly made.

92. Width at mid-arm ... 8 parts and
2 yavas.
93. Width of elbow ... 7 parts.
94. Width at mid-forearm ... 5 parts and
1 yava.
95. Width of wrist ... 3 $\frac{1}{2}$ parts.
96. Breadth at the root of palm ... 7
97. Breadth of mid-palm ... 6 $\frac{1}{2}$
98. Breadth of fore-palm ... 5 parts and
 $\frac{1}{2}$ yava.
99. Back of palm up to wrist ... 6 $\frac{1}{2}$ parts.

Thence the length of the fingers should be proportionate as stated before.

100. Length of ring-finger and of
middle-finger ... 4 $\frac{1}{4}$ each.
101. Length of fore-finger ... 5
102. " " thumb ... 4

103	Length of little-finger	4 parts
104	Width at the root of thumb	$1\frac{1}{2}$
105	" " " " " fore-finger	1
106	" " " " " ring-finger	1
107	" " " " " middle finger	$\frac{3}{4}$

The width of (tapering) fingers at their tips is $\frac{2}{3}$ or one-fourth less than at the root.

The width of the nails is $\frac{2}{3}$ of the breadth of the respective finger-tips, and the length of the nails is $\frac{1}{4}$ greater than their width, and the fore-parts of the nails measure two yavas.

The four fingers (beginning with the fore-finger) are each divided into three parts, and the thumb into two parts.

108	The portion between the roots of fore-finger and thumb	3 parts.
109	Its thickness	2
110	Thence to wrist	$1\frac{1}{2}$
111	Thickness of the portion below the thumb	$2\frac{1}{2}$
112	Its width	3
113	Breadth of heel	$\frac{1}{4}$
114	Its thickness	3
115	Its fore-part	1 part and 2 yavas.
116	Interior of the palm	2 parts.
117	Its width	4 yavas.

The palm is lined with five marks like those of lotus, trident, conch, disc, etc. And the rest regarding the hand should be discreetly made by the wise artist.

Measurement by the back side

118.	Width at the back of head	9 parts.
119	Thence to the end of ear	$13\frac{1}{2}$
120	Thence to the end of nose	$13\frac{1}{2}$
121	Shoulder (above the line of hiccough) from the neck-joint	4

122.	From neck-joint to hump	...	5 parts.
123.	Thence to the line of buttocks	27	.
124.	Thence to anus	...	13½
125.	Breadth to the left of it	...	21
126.	Width of the back of loins	...	17
127.	Width of the back or middle-body (madhya-kāya) above this	17	
128.	Distance between the breadths above this	...	21
129.	Distance between the arm-pits	...	27
130.	Drip of the backbone	...	1
131.	Breadth of the loins-joint connected with the backbone	...	2
	Thence should be measured the belly.		
132.	Width (breadth) of ribs-plank	...	12
133.	Distance between ribs-planks	...	4
134.	Height from ribs-plank to shoulder	...	5½
135.	The portion between the breast and backbone (bṛihatī)	...	7
136.	Its length (up to arm-pit)	...	(?)
137.	Bṛihatī up to breast-limit	...	16½
138.	Breadth of loins-line	...	13
139.	Projection of the root of thigh	...	5
140.	Width of perfectly round or spherical balls	...	9
141.	Width at the back of perfectly round breast	...	2
142.	Drip or depth of hiccough	...	1 yava.
143.	" " " heart	...	1 "
144.	Distance between the limits of breast	...	13½ parts.
145.	Distance between hiccough and arm-pit	...	13½

146	Depth of navel	2 yavas.
	The navel-pit is made circular	
147	Length of lower belly from navel to loins	6 parts.
148	Lower belly from navel to where cloth is attached to body	4
149	Height from loins to the root of sex-organ	7½
150	Breadth of sex-organ at the back	4
151	Thence (? loins) the length of sex-organ	12
152	Length (width) of testicles	2½
153	Breadth of testicles	2½
154	Breadth of sex-organ	1

The rest is left to the discretion of the artist
Śeṣam yuktuto nyaset (M. LXV 170)

This largest type of the ten tāla measure is used in measuring the images of Brahmā, Vishnu, Rudra and such other gods (M. II. 29, XLV 184-185) and of the statues of the devotees of the Sāyujya class (M. LIX. 12)

These measures are for general guidance, alternation being allowed for aesthetic reasons.*

* उद्देश्यिकहीनं वा शोभार्थं वैकल्पिकम् ।
रक्षमानाङ्गैः सर्वैस्तत्र रूपो न विद्यते ॥

(Mānasa, LXV 180-181)

See detailed sketches of these measures given in M. T. Gopinath Rao's Elements of Hindu Iconography (vol. I Appendix B)

See also Mr W S Hadaway's Some Hindu Śilpa Śāstras in their relation to South Indian Sculpture (Ostasiatische Zeitschrift, April-June, 1914 vol. II no 1)

The *ādimāna* or primary measurement as aforesaid comprises nine kinds.¹ But from the details given above of the first seven kinds, it is clear that they are in fact not primary in the ordinary sense of the term. Of the last two kinds, namely, the cubit (*hasta*) and *āṅgula* (finger-breadth), the former is but a multiple of the latter². The *āṅgula* alone, therefore, is really intended to be the *ādimāna* or primary measurement although the *āṅgula* itself is divisible into still smaller units, namely, *yava* (barley-corn), *yūka* (louse), *likshā* (nit), *vālāgra* (hair's end), *ratha-dhūli* (car-dust), and *paramāṇu* (atom).³ Thus the *āṅgula* measure has reference to both comparative and absolute measurements.

¹ See p 45

² *Mānasāra* (II. 48-52) :

12	āṅgulas	}	=	1	vitasti.
2	vitastis or			1	kikshu-hasta (small cubit).
24	āṅgulas	}	=	1	prājāpatya-hasta
25	āṅgulas			1	dhanur-mushṭi hasta.
26	āṅgulas			1	dhanur-graha-hasta.
27	āṅgulas			1	

4	<i>hastats</i>	=	1	<i>dhanus</i> (bow) or <i>daṇḍa</i> (rod).
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8	<i>ḍaṇḍas</i>	=	1	<i>rajju</i> (rope).
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But according to the *Kauṭīliya-Arthaśāstra* (ed. Sham Sastri, p. 107) :

10	<i>daṇḍas</i>	=	1	<i>rajju</i> .
3	<i>rajjus</i>	=	1	<i>nivartana</i> .

³ 8	<i>paramāṇus</i>	=	1	<i>ratha-dhūli</i> .
8	<i>ratha-dhūlis</i>	=	1	<i>vālāgra</i> .
8	<i>vālāgras</i>	=	1	<i>likshā</i> .
8	<i>likshās</i>	=	1	<i>yūka</i> .
8	<i>yūkas</i>	=	1	<i>yava</i> .
8	<i>yavas</i>	=	1	<i>āṅgula</i> (largest).
7	<i>yavas</i>	=	1	<i>āṅgula</i> (intermediate).
6	<i>yavas</i>	=	1	<i>āṅgula</i> (smallest).

(*Mānasāra*, II. 40-47; similar lists are found in other works also, and the smallest unit, *paramāṇu*, has been variously defined, see the writer's Dictionary of Hindu Architecture under *Āṅgula*.)

Directions are also given with regard to the use of the four different kinds of *haṭṭa* (cubit) which is the chief multiple of *angula*. The cubit of 24 *angulas* is used for measuring conveyances (*yāna*) and couches, of 25 *angulas* for measuring temples (*vimāna*), of 26 *angulas* for measuring *tāstu* which includes building lands, edifices (*harmya*), conveyance (*yāna*) and couches (*pariyauka*), and of 27 *angulas* for measuring villages, towns, and forts, etc. But the cubit of 24 *angulas* may be used in measuring all these objects.¹

This *angula* measure is mentioned throughout the Vedic and post-Vedic literature.² Thus in the Śatapatha Brāhmaṇa *angula* or finger is stated to be the lowest measure.³ *Prāḍesa* or span is also mentioned as a measure of length in the Śatapatha and Aitareya Brāhmaṇas as well as in the Chhāndogya-Upanishad.⁴

The Śulva-Sūtra of Baudhīyana defines *aratna* as equal to 2 *prāḍesas*, each of 12 *angulas*, and so makes it equal to 24 *angulas*.⁵

- १ यानं च शयने चैव किङ्कुहस्तेन मानयेत् ।
विमानस्य तु सर्वेषां प्रात्रपत्येन मानयेत् ।
मानयेद्वास्तुयन्मानं धनुर्मुष्टिकरेण च ।
ग्रामादीनां च सर्वेषां मानयेत्तदनुमदेन ।
किङ्कुहस्तेन यन्मानं मानयेद्विम्बतस्तु वा ।

(Manasara, II 54—58)

² The Buddhist literature as well as the epigraphical records contain copious references to the *angula* measure. They however do not give any full tables. Besides, owing to the limitation of space they are left out in this article. Fuller details will be found in the writer's Dictionary of Hindu Architecture under *Angula*.

- ३ तस्यैषावमा मात्रा यद्दङ्गुलम् ।

This is his lowest measure namely the finger "

(Śatapatha Brāhmaṇa, X 2 1 3)

⁴ Śatapatha Brāhmaṇa (III 5 4 5 etc.)

Aitareya Brāhmaṇa (VIII 5, etc.)

Chhāndogya Upanishad (v 18 1 etc.)

(See Vedic Index, Macdonell and Keith II 50)

⁵ Śulva Sūtra (see J.R.A.S. 1912 p 231 note 2)

The Kauṭīliya-Arthaśāstra starts with *paramāṇu* or atom, and takes its measures as in the other tables up to *aṅgula* of different *yavas* or barley-corns. It makes 12 *aṅgulas* equal to 1 *prādeśa* and 2 *prādeśas* to 1 *aratni* which is usually called *hasta* or cubit. Next it makes 4 *aratnis* equal to 1 *daṇḍa* (rod) or *dhanus* (bow).¹

Frequent mention of *aṅgula* and its multiples *prādeśa* (span), *hasta* (cubit) also occurs in the epics (Rāmāyaṇa, and Mahābhārata) and the Manusmṛitī.²

Like the Mānasāra referred to above, all the other avowedly architectural treatises contain detailed accounts of the whole system of measurement. Their treatment of the subject is similar. Reference to the Vāstu-vidyā may serve as an illustration.³

The astronomical works have also frequently referred to the subject. The tables are, however, similar in all these works. The Siddhānta-śiromaṇi, for instance, contains a table identical to the one given from the Mānasāra.⁴ The Bṛihat-saṁhitā has got

¹ Kauṭīliya-Arthaśāstra (ed. Shama Sastri, p. 106 f.)

² न ह्यविद्धं तयोर्गात्रे वभूवाङ्गुलमन्तरम् ।

(Rāmāyaṇa, VI. 20, 22, etc.)

तथा च जालान्तरगतभानौ यत्सूक्ष्मं दृश्यते रजः ।

प्रथमं तत्प्रमाणानां त्रसरेणुः प्रचक्ष्यते ।

निक्षेप्याऽग्रेमयं शङ्कुर्ध्वलङ्घास्ये दशाङ्गुलः ।

(Manusmṛitī, VIII. 132, 271, etc.)

³ तत्रादौ संप्रवक्ष्यामि सर्वेषां मानसाधनम् ।

मानेनैवाखिलं लोके वस्तु संसाध्यते यतः ॥

परमाणुकमाद्वृद्धो मानाङ्गुल इति स्मृतः ।

परमाणुरिति प्रोक्तो योगिनां दृष्टिगोचरः ॥

परमाणुरष्टाभिस्त्रसरेणुरिति स्मृतः ।

त्रसरेणुश्च रोमाग्रं लिङ्गायूकायवास्तथा ॥

(Vāstu-vidyā, ed. Ganapati Sāstri, I. 3-5.)

⁴ वेशमान्तः पतितेषु भास्करेण्वालोक्त्यते यद्रजः ।

स प्रोक्तः परमाणुरष्टगुणैस्त्रैरेव रेणुर्भवेत् ॥

तैर्वालाग्रमथाष्टभिः कचमुखैर्लिङ्गा च यूकाष्टभिः ।

स्यात्त्रिभिश्च तदष्टकेन च यवोऽष्टाभिश्च तैरङ्गुलम् ॥

(Siddhānta-śiromaṇi, ed. Bapudeva, p. 52.)

a similar table.¹ According to Dr Kern the *angula* or digit mentioned in the *Bṛhat-saṃhitā* "has no absolute but a relative value, it is the module and equal to $\frac{1}{16}$ of the whole height of the idol, or $\frac{1}{16}$ of idol and seat together"²

The tables given in the *Purāṇas* are also similar. The *Matsya Purāṇa* contains such a list.³ The *Brahmāṇḍa-Purāṇa* contains a little more details according to this *Purāṇa yojana* is the highest measure, which is used in measuring settlements.⁴

The *Rāja-vallabha-maṇḍana* has supplied an important list of the multiples of *angula*.⁵

1 angula is called	Mātrā (unit)
2 angulas are "	Kālā (a digit of the moon)
3 " " "	Parvan (a digit of finger)
4 " " "	Mushti (fist)
5 " " "	Tala (span)
6 " " "	Kara pāda (the palm of the hand)
7 " " "	Drishti (the eye)
8 " " "	Tūni (quiver)
9 " " "	Prādesa (span)

¹ *Bṛhat-saṃhitā* (LVIII 12) its commentary quotes *Manusamhitā* (VIII 133 see above) for the definition of *paramāṇu* and then explains the table as given in the aforesaid *Siddhānta-siroṃśā*.

² J. R. A. S. (new series) vol. VI. p. 323 notes 1, 2.

Matsya Purāṇa (chap. 258 v. 17-19)

³ चतुर्हस्तोऽनुदण्डो नाटिकायुगमेव च ।
 अनुसहस्रे द्वे तत्र गयूतिस्तु कृतास्त्रयम् ।
 अष्टौ चतुसहस्राणि योजने तद्विभाषितम् ।
 एतेन योजनेन सहस्रविंशत्युक्तं कृताम् ॥

(*Brahmāṇḍa Purāṇa*, part I *Anuśaṅgapāda* 2 chap. 7 v. 100-101)

⁴ *Rāja-vallabha-maṇḍana* (ed. Nārāyaṇa and Yashovanta Bharat, Introduction)

10	angulas	are called	.	Śaya-tāla (the stretched) palm.
11	"	"	"	... Gokarṇa (cow's ear).
12	"	"	"	... Vitasti (span).
16	"	"	"	... Anāha-pāda (? stretched foot).
21	"	"	"	... Ratni (cubit).
24	"	"	"	... Aratni (cubit).
42	"	"	"	... Kishku (cubit).
84	"	"	"	... Purusha (height of a man).
96	"	"	"	.. Dhanus (bow).
106	"	"	"	... Daṇḍa (rod).

The Suprabhedāgama which gives a very elaborate account of the whole system contains a large variety of alternatives for the multiples of *aṅgula* as given in the preceding list :¹

1	aṅgula	is called	...	Bindu and moksha.
2	angulas	are	"	... Kalā, kolaka, padma, akshi, and aśvinī.
3	"	"	"	. Rudrākshi, agni, guṇa, śūla, and vidyā.
4	"	"	"	... Yuga, bhāga, tur(i)ya, and veda.
5	"	"	"	. Rudrānana, indriya, and bhūta.
6	"	"	"	. Karman, aṅga, ayana, and rasa.
7	"	"	"	. Pātāla, muni, dhātu, and abdhi.
8	"	"	"	... Basu, loka (for dik-pāla), and mūrti.
9	"	"	"	.. Dvāra, sūtra, graha, and śakti.
10	"	"	"	... Diś, nāḍī, āyudha, and prādur- bhāva.
20	"	"	"	Trishu, and vishku.
30	"	"	"	. Gati.
40	"	"	"	... Tri-jagat.
50	"	"	"	... Śakvari.

¹ Suprabhedāgama, xxx. 10—16.

60	angulas are called	Ati śakṣaṇ.
70	" " "	Yashtī.
80	" " "	Atyashtī.
90	" " "	Dhṛtī.
100	" " "	Ati-dhṛtī.

This Āgama also supplies in this connection an interesting list of the cardinal numbers which now-a-days do not go beyond *lakṣa* (100,000, one lac) in the Indian counting and 'million' (10,00,000, ten lacs) in the Western system¹

Eka	1.
Dvā	10
Sata	100
Sahasra	1,000
Ayuta	10,000
Niyuta (otherwise called <i>lākṣa</i>)	100 000
Prayuta	10 00 000.
Koti (kroḍa or krór)	10 000 000
Vinda	1000 00 000
Kharva	10 000 00 000
Nikharva	100 000 00 000
Saekha	1000 000 00 000
Padma	10000 000 00 000
Samudra or Sagara	100 000 000 00 000
Madhyantara	1000 000 000 00 000
Para	10 000 000 000 00 000
Apara	100 000 000,000 00,000
Parardha	1000 000 000 000 00 000

¹ Suprabhedāgama XXX II-23

Figures even larger than *parardha* are still used in counting revenues, population, etc. but they are referred to by the multiples of lac or krór in India and million in the Western countries. So out of the eighteen cardinal numbers seven or eight are now in actual use. Whether or not all the eighteen numbers were ever actually used in counting is altogether a different question and need not be discussed here. Nor would any useful purpose be served in discussing here the comparative value of the ancient and the modern methods of counting.

“ Now the *aṅgula* or finger-breadth may be the theoretical unit; it may well have been originally the actual unit and the source of other measures. But we can hardly doubt that the *hasta* or cubit eventually took its place as the practical unit, and that a correct scale was maintained by keeping in public offices a standard *hasta* marked off into 2 *vitastis* and 24 *aṅgulis*. At any rate, the *hasta* is the practical measure to which we must attend in estimating all the others.” Dr. Fleet¹ also following Colebrooke² takes *hasta* for easy computation at exactly 18 inches, which gives $\frac{3}{4}$ inch as the value of the *aṅgula*³.

¹ J. R. A. S., 1912, p. 231, note 2.

² Essays, I. 540, note.

³ The Brahmāṇḍa-Purāṇa gives a curious origin of the *aṅgula* measure. It is stated that people at first used to reside in caves, mountains, and rivers, etc. They began to build houses in order to protect themselves from cold and heat. Then they built *khetas* (settlements), *puras* (houses), *grāmas* (villages) and *nagaras* (cities). And to measure their length, breadth and the intermediate distance between two dwellings (*sannivesa*) the people instinctively employed their own fingers. Thenceforward the *aṅgula* is used as the unit of measurement.

(Brahmāṇḍa-Purāṇa, part 1, 2nd Anuśaṁgapāda, chap. 7, v. 91—95.)

THE DATE OF KĀLIDĀSA

CORRIGENDA

PAGE	LINE	FOR	SUBSTITUTE
82	32	or rather "pricking, etc...	or rather on "pricking, etc.

- ADDENDUM

P. 140, l. 20, etc. "The King of Rājagṛha"—

The expression is wrong and is due to the old reading "*Rājagaha-Napaṃ pīḍāpayati*" (l. 8). Khāravēla does not say that Rājagṛha was the capital of Bahasatimitra. Mr. Jayaswal's revised reading "*Rājagahaṃ upa-pīḍāpayati*" (J. B. O. R. S., IV, p. 378), which had formerly escaped my notice, simply shows that Khāravēla came in conflict with the Magadhan power at Rājagṛha and he may not have entered the capital of Magadha till the twelfth year of his reign (l. 12). There is no ground for assuming that Rājagṛha and not Pāṭaliputra was the capital of Magadha in Khāravēla's time. [*Vipamumcitum* in l. 8 of the inscription is probably gerundial in sense though infinitive in form, a not infrequent usage in (Ardhamāgadhī) Jaina texts.]

V. B.—P. 140, n. 3, l. 1.—'Vātsa' should be 'Vidīśa'

	21	contemporary, Kuṣāṇ	...	contemporary Kuṣāṇ
123	32	Harit	...	Harit
124	4	V. 61	...	v. 61

[u]

PAGE	LINE	FOR	SUBSTITUTE
128	23	Hun	Hun
130	35	Piśkurana	Puṣkarana
131	36	Sūtra	Śūtra
132	40	काण्डाभाग्रसीङ्गाद्व	" काण्डाभाग्रसीङ्गाद्व
133	21	व्याप्य	व्याप्य
136	5	Verses	verses
		Verse	verso
140	37	Śakadvīpa	Śakadvīpa
148	3	Susea	Suṣeṇa
149	31	Lūder	Lūders
161	20	Bāveru Jātaka (the	Bāveru Jātaka, (the
	32	Lagideā	Lagidai
163	26	खल्ल	खल्ल
164	27	सामिप्रायस	सामिप्रायस
	28	दिष्ट	दिष्ट
167	24	Āryadeva	Āryadeva
	29	sthūla-hastā = valepa	sthūla-hastā-valepa
	32	एषदिम	एषदिम
169	25	in Ku, that	in Ku that

THE DATE OF KĀLIDĀSA¹

KṢETREŚACHANDRA CHATTOPĀDHYĀYA, M.A.,

Lecturer in Sanskrit.

कालीं देवीं मनसि निहितां पूजयित्वा मयादौ
कालस्त्वस्य प्रथितयशसः कालिदासाह्वयस्य ।
सम्यक्त्वं वै खलु गतवतो विक्रमादित्यनाम्नो
राज्ञो दिष्टः सुललितकवेस्त्वयमीमांसनेन ॥
अश्वाख्यो यो जिनवरकविर्वुद्धकाव्यादिकर्ता
पूर्वं जातो नहि रघुकवेर्निश्चयोऽसौ दृढो मे ।
शृण्वन्वेतद् विभुघनिकराः पक्षपातं विमुञ्ज्य
तुष्टः स्याद्यन् मयि किल गुरुः श्रीमहानन्ददेवः ॥

Mr. K. G. Sankara has tried to show in the second number of the Indian Historical Quarterly (vol. I, pp. 309—316) that in spite of the almost unanimous view of scholars to the contrary, Kālidāsa should be assigned to the first century before Christ, and he seems to me to have made a strong case. Mr. Sankara has before this expressed himself in favour of the usually assigned date of 4th—5th century A.D.,² and his present change of view seems remarkable. When I was first acquainted with Aśvaghōṣa's *Saundarananda* and its concluding

¹ The following abbreviations, besides those most usual, are used here :—*Bu.* for *Buddhacarita*, *Sau.* for *Saundarananda*, *Ku.* for *Kumārasambhava*, *Ra.* for *Raghuvamśa*, *Me.* for *Meghadūta*, *E.H.I.*² for *Smith's Early History of India* (4th edition), *C.H.I.* for *Cambridge History of India*, *D.K.A.* for *Pargiter's Dynasties of the Kali Age*, *I.H.Q.* for *Indian Historical Quarterly*, *Q.J.M.S.* for *Quarterly Journal of the Mythic Society*, Bangalore, *J.B.O.R.S.* for *Journal of the Bihar and Orissa Research Society*, *A.B.I.* for *Annals of the Bhandarkar Institute*, *A.H.D.* for *G. Jouveau-Dubreuil's Ancient History of the Deccan*.

² *Quarterly Journal of the Mythic Society*, vol. VIII pp. 278—292, vol. IX, 17—56, X, 188—190, and *Annals of the Bhandarkar Institute*, vol. II, pp. 189—191.

verses in my undergraduate days I formed an impression that Āśvaghoṣa was the borrower and not Kālidāsa. Later studies confirmed me in my opinion. I am therefore fully in accord with what Mr Sankarā now says about the relations between Kālidāsa and Āśvaghoṣa on p 312 of this article. Some four years ago when lecturing to my class on the history of Sanskrit literature I began a thorough study of the question, which, unfortunately, could not be finished at the time. My studies having now taken an altogether different line, I can no more hope to be able to return to it. But as some new facts had come to my notice or new interpretations occurred to me, which could probably be utilised by specialists in the field, I take this occasion of publishing them, *unequivocally admitting the incompleteness and other deficiencies of my work*. The present paper should be taken as a supplement to Mr Sankarā's and should be read with it.

Since Cowell published the *Buddhacarita* and wrote in its preface (pp x, xi, xii) about the relation between Kālidāsa and Āśvaghoṣa, scholars have assumed that the former had borrowed from the latter. And this is but natural, for has not Darwin made evolutionists of us all? The "finished picture" must be later than and have come out of the "rude sketch." There is no inherent improbability in this assumption, for Buddhist tradition knows Āśvaghoṣa as a great poet, and if Dr Thomas is right in identifying him with Āryaśūra and Mātṛeṣṭa,¹ the number of works written by him was very large. Such a prolific writer would hardly lack in originality. One fragmentary drama has been discovered in Central Asia, claiming to be written by Āśvaghoṣa, and two more found with this manuscript have been ascribed to him.² That Āśvaghoṣa

¹ Kavindravacanasaṃuccaya, Introduction p 25 (also Album Kern pp 405-8 and Indian Antiquary pp 340-360).

² The Śāriputraprakāraṇa of Āśvaghoṣa published by Professor H Lüders in the *Sitzungsberichte der königlich preussischen Akademie der Wissenschaften Berlin* 1911 pp 388-411 (with two plates) and *Bruchstücke buddhistischer Dramen*, hrsg v H Lüders, Berlin 1911.

was invited, according to Paramārtha,¹ to give a literary form to the Vibhāṣā compiled by Kātyāyanīputra and others, clearly establishes his fame as a writer. There is also nothing incongruous in the great Kālidāsa's borrowing here and there from this "Buddhist Ennius," for can it in any way detract from the great merits of our poet Rabindranath Tagore, says a certain scholar, that his poems show the influence of the Vaiṣṇava poets of mediæval Bengal? I fully admit that this assumption of scholars has nothing unnatural about it, but is it grounded on so strong evidence that we must take it as correct? Is not Hemacandra's position in Jaina literature somewhat similar to that of Aśvaghoṣa in Buddhist and is not Hemacandra under a deep debt of gratitude to a whole host of preceding writers? The analogy of our Rabindranath also seems to me to be inappropriate, but I shall not discuss it here. I compared some of the similar passages in Kālidāsa and Aśvaghoṣa, and many of them clearly indicated who borrowed from whom—the uniform indication being that it was Aśvaghoṣa who had borrowed. I had wanted to make a detailed study of all the works of Aśvaghoṣa and to trace the development of his literary style, but inaccessibility of sources and the diversion of my own studies to other channels prevented me from doing all that I wanted to. But I present my unfinished picture before scholars in the hope that if they are convinced of its correctness in main features in spite of deficiencies, somebody better equipped than myself may some day take it up, finish it and remove its shortcomings.

¹ Life of Vasubandhu, translated by J. Takakusu ("T'oung-pao," 1904—p. 12 of its reprint). Dr. Takakusu published in the J.R.A.S. for 1905 a summary of Paramārtha's Life of Vasubandhu and a discussion of its contents. Scholars who are not satisfied with his views about Vindhyavāsa and his identification with the author of the Sāṅkhyakārikās will do well to read his translation of Paramārtha's Life of Vasubandhu in the "T'oung-pao," whose careful study led me to reject Dr. Takakusu's own inferences.

The concluding verses of the *Sundarananda*, referred to above, which set me on this track, are —

हृत्वेया म्युपशान्तये न स्तवे मोक्षार्पणार्भाकृति
 भोतृणां ग्रहणापमन्यमनसो काम्योपधाराकृता ।
 यन्मोक्षार्पणमन्यद्वयं हि मया तत्काम्यधर्मात् कृति
 पानु त्विहमिवोपध मधुमुत कथं कथं सादिति ॥
 भावेयालोकाय लोकं विपरिवार मोक्षार्पणमिति
 काम्यधर्मात् तत्त्व कथितमिह मया मोक्षपरमिति ।
 नद्वयत्वा शान्तिकं यत् तद्वदितमितो प्राप्य न रुजित
 पाशुभ्यो धातुजभ्यो नियतमुपकर चाभीकरमिति ॥

These verses show that *Āśvaghoṣa* does not claim to be a professed poet. Actually he is more of a metaphysician (or a monk) than a poet, in spite of what Mr. Numan says of him,¹ for he is seldom so eloquent, so impressive, as when he writes on religious or philosophical topics. He has written this work "for the extinction of desire and not for enjoyment of pleasures" "in the form of a *kāvya*," "but making it contain teachings of salvation," that its "readers (lit. listeners), who are by nature turned to other thoughts, may understand it (and take it to heart)", "what has been written elsewhere in the form of a religious text" is being repeated by our author "in the way of a *kāvya*, as a bitter medicine is mixed with honey when given to a patient to drink that it may be acceptable to him." Thus it once shows that *Āśvaghoṣa* writes under a constraint. He would rather write directly about *mokṣa*, as he says he has done already, but men are "mad after things of enjoyment and averse to salvation", he has therefore no help but "to teach salvation (which involves abandonment of all enjoyments) under the cloak of a (pleasant) *kāvya*." One should carefully ponder over these words. Would we expect originality here? *Āśvaghoṣa* was out on paying the world in its own coin, or rather 'pricking out the thorn with another,' as the Sanskrit expression goes. He will charm men with the

¹ Literary History of Sanskrit Buddhism 1st ed (1920) p. 32

poetic form they are accustomed to, but he will charm them out of their passions. Such a writer would best achieve his end by taking up the popular work or works of some professed poet or poets and modelling his work thereon and it seems to me that Āśvaghoṣa has actually done this. I can never deny that Āśvaghoṣa had the gifts of a true poet, that his *Saundarananda* and *Buddhacarita*¹ abound in highly poetical passages which can rank with any other in Sanskrit literature and, whatever may be the ordinary expectation, he is not wanting in originality in his poetry. If a philosopher is constrained to write poetry, he will naturally read and try to imitate poems of professed poets ; but if he is himself not blessed by the Muses, his attempt will be a poor caricature. Such could not be the case with Āśvaghoṣa who had the gifts of a real poet but whose lines were cast in other fields. He too seems to have turned to other models but his genius enabled him to transcend them soon. The last half of the concluding verse of the *Saundarananda*, “तद्बुद्ध्वा शमिकं यत् तदवहितमितो ग्राह्यं न ललितं पांशुभ्यो धातुजेभ्यो नियतमुपकरं चामीकरमिति,” “therefore discriminating, what is there conducive to the extinction of desires in this work should be accepted by readers and not what is about enjoyment, as pure gold is always accepted after separating it from the dross that adheres to it in the ore,” clearly indicates Āśvaghoṣa’s models. Is not the reader at once reminded of Kālidāsa’s “तं सन्तः श्रोतुमर्हन्ति सदसद्व्यक्तिहेतवः । हेमन्तः संलक्ष्यते ह्यग्नौ विशुद्धिः श्यामिकापि वा ॥” (*Raghuvamśa*, I. 10), “Good men who can discriminate between good and bad should listen to this *kāvya*, for it is in fire that the purity or otherwise of gold is tested,” which in spite of differences shows a genetic connexion? That Kālidāsa could have taken the idea from Āśvaghoṣa and expressed it in a happy context is *a priori* not impossible, but some of the other passages agreeing in the two authors clearly prove Āśvaghoṣa’s indebtedness. ‘स्तये’ “for

¹ I omit from consideration the *Gaṇḍī-stotra* and the other religious works.

enjoyment," is certainly a good description of Kālidāsa's poems, which are all lavish in their eroticism, the bigger, the Raghuvamśa and the Kumārasambhava,¹ both "ending in the sweetness of erotics."

Since the publication of what Cowell wrote in his preface to the Buddhacarita (pp x, xi), it has been customary to point out the great similarity between Buddhacarita, III, 13—24, and Raghuvamśa, VII, 5—12, but Mr Sankara has done very well in pointing out that the similarity extends to two more verses (16 and 17) of the Raghuvamśa and that Kālidāsa has said the self-same words in Kumārasambhava, VII, 56—70. I am in complete agreement with what Mr Sankara says and I need not repeat his words. But a few sentences of the late Mr Śrīrādīranjan Ray on this subject deserve quotation. "When an author repeats in one book what he has written in another, it is sure sign that he is repeating his favourite ideas. On this consideration, the presumption is that *Kālidāsa is the author of these common ideas*. If he were not, he would not have paraded them this way. The thief does not make a display of stolen goods"² Another remark of Principal Ray, made with reference to the rising from sleep of Aśvaghosa's damsels to see the prince (वा ससकृद्वाहीयुषविविक्ताश्च सुप्तप्रमुखाकुललोचनाश्च । दृष्टान्तविन्यस्तविभूषणाश्च कौटुहलेनापि भृता [इता ?] परीयु ॥ Bu, III 14), may be quoted. "The prince did not pass at midnight, and it is difficult to understand this sleep in high quarters"³ Aśvaghosa was obviously

¹ I believe that Kālidāsa wrote only the first eight cantos and the rest came from another hand. What made the poet leave Kumārasambhava (a work certainly earlier than the Raghuvamśa and therefore not the last writing of the author) unfinished cannot be determined now. Did the impropriety of *śarannātāpitr samthopavarṇana* occur to him and made him leave aside his pen? If so the Kumāra must be a posthumous publication. Such a supposition would explain the verbatim repetition of some lines of the poem in the later Raghuvamśa. For another possible explanation see below.

² Sakuntalā, 5th ed goes. 11090 Introduction p 24

³ Ibid p 25. History of Sanskrit

thinking of the two descriptions in Kālidāsa of bridegrooms going to the marriage, which is nowadays held at night. But some doubt about similar custom in Kālidāsa's days is cast by Ku., VII. 63, "तावत्पताकाकुलमिन्दुमौलिहस्तोरणं राजपथं प्रपेदे । प्रासादश्चाणि दिवापि कुर्वन्ज्योत्स्नाभिषेकद्विगुणद्युतीनि ॥," where Mahādeva is described as going by day.¹ Be that as it may, the fourth line of Āśvaghoṣa's verse, "कौतूहलेनापि भृताः (वृताः ?) परीयुः ।," "they went about surrounded on all sides by curiosity," clearly betrays the influence of Ku., VII. 62, and Ra., VII. 11, "तासां सुखैरासवगन्धराभैर्व्याप्तान्तराः सान्द्रकुतूहलानाम् । विलोलनेत्रममरैर्गवाक्षाः सहस्रपत्राभरणा इवासन् ॥" *Kautūhala* (mentioned also in Kālidāsa's verse) is conceived by Āśvaghoṣa as surrounding² the damsels in imitation of the *netra-bhramara* of Kālidāsa's beauties buzzing over their lotus-like faces. The simile of the lotus has not been forgotten by Āśvaghoṣa as I shall presently show. The last half of Bu., III. 23, "धन्यास्य भार्येति शनैरवोचञ् शुद्धैर्मनामिः खलु नान्यभावात्," "they said slowly *with pure hearts* and not from any other motive 'Blessed is his wife,'" completely proves, as Mr. Sankara has pointed out,³ that Āśvaghoṣa was thinking of a similar occasion where the damsels did feel the dart of love. That Āśvaghoṣa had Kālidāsa's description in mind, is proved without the possibility of any doubt when we compare the passages in the *Raghnvaṃśa* and the *Kumārasambhava*, particularly the following verses :—

Ra.	Ku.
ता राघवं दृष्टिमिरापिवन्त्यो नार्यो न जग्मुर्विषयान्तराणि । तथा हि शेषेन्द्रियवृत्तिरासां सर्वात्मना चक्षुरिव प्रविष्टा ॥१२॥	तमेकदृश्यं नयनैः पिवन्त्यो नार्यो न जग्मुर्विषयान्तराणि । तथाहि शेषेन्द्रियवृत्तिरासां सर्वात्मना चक्षुरिव प्रविष्टा ॥६४॥

¹ Was Āśvaghoṣa misled by the mention of ज्योत्स्ना ? Probably he places the prince's journey very early in the morning.

² वृता, my emendation for भृताः which hardly makes any sense.

³ Similarly, Mr. Dhanapati Banerji, in Q. J. M. S., X., p. 87, and S. Ray, *Sakuntalā* Intro., pp. 27-8. I am indebted to Professor Dr. Radhakumud Mukherji for having drawn my attention to Mr. Banerji's paper.

Ra

स्थाने वृता भूरतिभिः परोर्धे
स्वयम्बर माधुममस्त भोम्या ।
पद्मेव नारायणमन्यथायौ
लभेत कान्त कथमाप्तुमस्यम् ॥११॥
परस्परं स्पृहणीययोः
न चदिद् इन्द्रमयोत्रविष्यत् ।
अस्मिन् द्वये रूपविधानयत्
पत्युः प्रजानां वितथोऽभविष्यत् ॥१२॥
रतिस्मरी नूनमिमावभूता
तायां सहचरु तया हि बाढा ।
गतेपमाभप्रतिरूपमय

मना हि जन्मान्तरमङ्गलिजम् ॥१२॥ (Compare *Sikuntalā*, V, भारव्यसायि
जननान्तरागौहद्वयि)

न नूनमास्त्ररुपा शरीरम्
धनन इत्थं कुमुमायुधस्य ।
योडादमु दवमुदीर्य मन्ये
सेव्यस्त्ररु स्वयमेव काम ॥१०॥
धनन सम्यग्धमुपेत्य दिव्या
मनोऽयमार्यितमीश्वरेण ।
भूर्धानमात्रि विविधार्योचम्
वधोऽत्र वपति योऽत्रात्र ॥१८॥

Ka

म्याम तयो दुधमेवदधम्
अपदेवा पेटवयापि तप्तम् ।
या दास्यमप्यस्य लभेत नारी
सा स्वात्तृताया किमुताङ्कशय्याम् ॥६५॥
परस्परं स्पृहणीययोः
न चदिद् इन्द्रमयोत्रविष्यत् ।
अस्मिन् द्वये रूपविधानयत्
पत्युः प्रजानां विद्वोऽभविष्यत् ॥१६॥

Kālidāsa seems to make the damsels smitten with love at the bridegroom's beauty and envious of the bride's (and bride's father's) fortune.' This is altered by Āsvaghosa because Buddha is not a bridegroom going to marry and it also hurts his puritanism that the city damsels should thus feel attracted to a *parapatī* (another woman's husband), hence his "दुर्दैमनाभिः चक्षुः नान्यभावाद् " A certain want of restraint seems manifest in Kālidāsa's beauties, but the damsels in Āsvaghosa's poem are made to go out to see the prince with the permission of the elders'

¹ See the portions in thick type above and also विद्वोः नारायणमन्यथायौ in Ra. VII 17 and चक्षुः नान्यभावाद् in the following verse — पाप and धर्म refer to the other women and not to the वर Indumatī, to whose presence Aja is carried after this (VII 19)

(जनेन मान्येन कृताभ्यनुज्ञाः Bu., III. 13d). Does not this expression when contrasted with Kālidāsa's "इत्थं बभूवुः...त्यक्तान्यकार्याणि विचेष्टितानि (improved into विलोकनानि in Ra.)" 'they thus behaved (or went out to see) leaving all other work' show that the puritan is seeking to improve on his predecessor? Mr. Sankara has rightly drawn attention to the unnecessary repetitions in Āśvaghoṣa and these clearly indicate a novice's hand. There is a slight indelicacy in Ku., VII. 60 (and Ra., VII. 9) "जालान्तरप्रेषितदष्टिरन्या प्रस्थानभिन्नां न बबन्ध नीवीम् । नाभिप्रविष्टाभरणप्रभेण हस्तेन तस्यावलम्ब्य वासः ॥" which is in characteristic¹ Kālidāsean style and Āśvaghoṣa has avoided it by combining this verse and the following one ("अर्धाचिता सत्वरमुत्थितायाः पदे पदे दुर्निमित्ते गलन्ती । कस्याश्चिदासीदृशना तदानीमङ्गुष्ठमूलार्पितसूत्रशेषा ॥") into his own "ताः सस्तकाञ्चीगुणविम्विताश्च सुसप्रबुद्धाकुललोचनाश्च । वृत्तान्तविन्यस्तविभूषणाश्च

P. 87, l. 18

For "ताः सस्तकाञ्चीगुणविम्विताश्च"

read "जालान्तरप्रेषितदष्टिरन्या"

the bridegroom passes when the ladies are at their toilets which they leave at once. Āśvaghoṣa makes the damsels rise from their sleep³ to see the prince pass by. Reference to finished or unfinished toilet is therefore impossible; but Āśvaghoṣa has repeatedly spoken of the ornaments of

¹ My apologies to the author of the *प्रौढीन साहित्य* for this expression.

² Kern's emendation *द्विषा मगलभा विनिगूढनाना*, quoted with approbation by A. Gawronski (*Rocznik Oryentalistyczny*, I., p. 23), is an unhappy one. How can one be *pragalbha* (=shameless) through *hrī* (=shame)? The text as it stands gives quite good sense: the damsels felt ashamed of the jingling noise of the ornaments (*mekhalā*) worn near the privates. But that Āśvaghoṣa makes the damsels *hide* (निगूढनाना) these ornaments—an ineffective way of stopping their noise—and not take them off shows how much he was obsessed by the ideas of Kālidāsa. Āśvaghoṣa's attempts at varying his models often launches him in ludicrous situations.

³ Probably there is nothing incongruous in Āśvaghoṣa's *सुसप्रबुद्धाकुललोचनाः*—he may have made the prince pass very early in the morning when all persons had left not their beds.

the ladies which do suggest the toilet chamber Kālidāsa's texts therefore must have been before Aśvaghoṣa. The idea in Kālidāsa's single verse तासां मुकुटसवयवगमैः
न्यासान्तरा साद्रकुण्डलानाम् । विलोचनेयभ्रमरैर्गवाणा सहस्रजगभरणा इवासम् ॥
(Ku VII 67 Ra, VII 11) is repeated twice by Aśvaghoṣa
वातायनम्यस्तु विनि सतानि परस्परोपासितकुण्डलानि । स्त्रीणां विरजुमुलपङ्कजानि
सक्तानि हर्म्यैस्त्रिव पङ्कजानि ॥१६॥ वातायनानामविराजभावाद्भ्योन्मगण्डापरैत
कुण्डलानि । मुन्यानि रेजु प्रमदात्तमाना यदा कटासा इव पङ्कजानाम् ॥२१॥"
Does not this clearly indicate who is the plagiarist here? The
pauṣṭyic monk has taken care to omit "the fragrance of
vine. And "अथ किल म्यायतपीनगाहू रूपेण साचादिव पुष्पकेतु " (Bu,
III 21 a b) clearly betray the influence of Ra, VII 15 and
Ku, VII 67 quoted above

Professor Correll said about these agreements "We must
not forget here that in Kālidāsa the description only belongs to
an episode in the main poem—in the Buddhist author it is a
natural incident in one of the most important chapters of the
whole work. Kālidāsa merely brings in a few characteristic
details as he is hurrying on to the marriage and the subse-
quent attack by the disappointed rivals. Aśvaghoṣa dwells
in a more leisurely way on the various attitudes and gestures
of the women, in order to bring out in bolder relief the central
figure of the hero. These statements seem very strange to
us. The description in Kālidāsa has as great connexion with
the main theme as in Aśvaghoṣa, or rather it may be said that
the latter's description is highly inappropriate. It should be
noted that the object of feminine curiosity in Kālidāsa is a bride-
groom going to marry. Women still flock to windows and
roofs of houses, everywhere in India, when a bridegroom passes
through the streets in procession. Therefore Kālidāsa's is not
a hurried description but an indispensable thing in an Indian
poem. For Aśvaghoṣa no justification can be shown what
the women did is altogether out of place there. His only motive
seems to have been to tread in the path of professed poets
and then to introduce his religious suggestions thus he does in

v. 24 c, d—"लक्ता श्रियं धर्ममुपेव्यतीति तस्मिन् हिता गौरवमेव चक्रुः," but unfortunately with some abruptness. The very fact that Kālidāsa's is a short description and Aśvaghōṣa's a "leisurely" one should indicate, unless anything is known or can be established to the contrary, that the latter is the later writer. Is not Aśvaghōṣa more lavish in his expressions in both his works than the renowned master of *Vaidarbhī* style? And are we not aware of the increase in verbosity in Sanskrit literature with the progress of time? One such late poet felt constrained to say in a moment of self-realisation, "सुदे सुरारेरमरैः सुमेरोरानीय यस्तोषचित्तस्य शृङ्गैः । भवन्ति नेहामगिरां कवीनामुच्छ्रायसौन्दर्यगुणा मृषोद्याः." ¹ What the Professor says about the impending attack by the disappointed rivals becomes altogether meaningless the moment we substitute the Kumārasambhava in the place of the Raghuvamśa, for no such incident awaits the bridegroom in the former poem. Professor Cowell (p. xi of his Preface) did not shrink from tracing Aśvaghōṣa's influence in Rāmāyaṇa (V. 9-11), but a more sensible writer makes Aśvaghōṣa the imitator.² I am fully conscious of possible Buddhist influences³ over Kālidāsa's mind, but what the learned Professor has put down as a Buddhist idea (Preface, xi) fails to appear to me as such. Buddhism seems to have become a name to conjure with and we often find things soberly put down under its especial label, which are neither Buddhist nor Jaina, nor even Brāhmanical, but simply Indian.

In comparing Aśvaghōṣa and Kālidāsa, the Buddhacarita is generally placed by the side of the Raghuvamśa. But a careful study has convinced me that the Buddhacarita agrees more with the Kumārasambhava than with the Raghuvamśa which resembles the Saundarananda more. The editor of the

¹ Śiśupālavadha, IV. 10.

² Keith, "Classical Sanskrit Literature," p. 23.

³ In an *ahimsā* tendency. Are the influences Buddhist or Jaina? There was a strong Jaina settlement in Western India in the first century B.C. when, as I shall show below, our poet lived.

Saundarananda has suggested (Preface, iv) that the Buddhacarita was written earlier than the Saundarananda, but I have little hesitation in rejecting this view. Any one who reads the two books carefully will feel convinced that MML Pandit H. P. Shastri has here gone wrong. Professor Keith¹ rightly considers the Buddhacarita to be the later work. It is because the Saundarananda is his first *kāvya* that Asvaghosa wrote those apologetic lines at the end of the work. When writing the Buddhacarita, his fame as a poet must have been established and he needed no apology. But, of course, we have no means now to determine what were exactly the last words of the Buddhacarita. The Chinese translation² seems to be a condensed version. 'To sing the praises of the lordly monk, and (declare) his acts from first to last, 2300, without self-seeking or self-honour, without desire for personal renown, but following what the scriptures say to benefit the world 2310"³ seems to be connected with the first half of verse 2300, viz., "And having shown the way to all the world, who would not reverence and adore him?" and Béal's supposition that 'has been my aim' is to be supplied to complete the sense seems unwarranted. I shall now give some of the grounds on which I have guessed the especial connexion between the Saundarananda and the Raghuvamśa and between the Buddhacarita and the Kumarasambhava. The parallels I adduce below will not all convince my readers but I doubt not that some will and that the cumulative effect of the evidence will establish my case.

To begin with the Saundarananda, in the third verse of its first canto, 'इति यश्च स्वात्मार्थं नामधुर्यं वसिष्ठम् । तप सिद्धेयु सिद्धेयु गम्यु(य)क्त्वा वसिष्ठम् ॥' said about the sage Gotama, seems to have been suggested by "दुहोद गो स यज्ञाय" Ra. I 26, and the reference to Vasistha in the latter half of the first canto of Ra. and to his cow in that and the following cantos. The sixth

¹ Classical Sanskrit Literature p. 22

Translated into English by Béal S.B.L. XIX, Oxford 1883

² S.B.L. XIX p. 338

verse "चारुवीरुत्तखनः प्रस्निग्धमृदुशाद्वलः । हविर्धूमवितानेन यः सदाभ्र इवावभौ ॥" has some agreements with Ra., II. 17, "स पल्लवलोत्तीर्ण-वराहयूयान्यावासवृक्षोन्मुखबर्हिणानि, ययौ मृगाध्यासितशाद्वलानि श्यामायमानानि वनानि पश्यन् ॥". Sau., I. 10 "नीवारफलसन्तुष्टैः स्वस्थैः शान्तैरनुसुक्तेः । आकीर्णोऽपि तपोभृङ्गैः शून्यशून्य इवाभवत् ॥" has certainly a resemblance with Ra., I. 50, "आकीर्णमृपिपत्नीनामुटजद्वाररोधिभिः । अपत्यैरिव नीवार-भागधेयोचितैर्मृगैः ॥" and Ra., I. 52, "आतपात्ययसंचितनीवारासु निपादिभिः । मृगैर्वर्तितरोमन्थमुटजाङ्गनभूमिषु ॥" (also, Śāk., I Act, "नीवाराः शुक्रगर्भको-टरमुखभ्रष्टास्त्रुणामधः प्रस्निग्धाः कचिदिङ्गुदीफलभिदः सूच्यन्त एवोपलाः । विश्वासो-पगमादभिन्नगतयः शब्दं सहन्ते मृगास्तोयाधारपथाश्च वल्कलशिखानित्यन्दरेखाङ्कि-ताः ॥"). There is reference to the sacred fires in Sau., I. 11 and also in Ra., I. 53. Ra., I. 50 and 52, just quoted, seem also to have some connexion with Sau., I. 12, "विरेजुः हरिणा यत्र सुप्ता मेध्यासु वेदिषु । सलजैर्माधवीपुष्पैरुपहाराः कृता इव ॥" The following verse of the Saundarananda, "अपि क्षुद्रमृगा यत्र शान्ताश्चेरुः समं मृगैः । शरण्येभ्यस्तपस्विभ्यो विनयं शिञ्चिता इव ॥" seems to contain matter from two different verses of the Raghuvamśa: "(लताप्रतानोद्ग्रथितैः स केशैरधिज्यधन्वा विचचार दावम् ।) रक्षापदेशान्मुनिहोमधेनोर्वन्यान् विनेप्यन्निव दुष्टसत्त्वान् ॥" II. 8 and "(शशम वृष्ट्यापि विना दवाग्निरासीद्विशेषा फलपुष्प-वृद्धिः ।) ऊनं न सत्वेष्वधिको यवाद्ये तस्मिन् वनं गोप्तारि गाहमाने ॥" II. 14. Āśvaghoṣa makes the Ksudra-mrgas ('small animals') roam in peace with *mrgas*. But *mrga*, by itself, does not mean only the big animal or the ferocious animal, either of which must have been meant by the poet, as शान्ताः ('peaceful') and विनयं शिञ्चिताः ('taught lessons of gentleness') unmistakably indicate. Kālidāsa has expressly mentioned the ferocious and big animals ('दुष्टसत्त्वान्' 'अधिकः') and he has also made them and not the weak animals taught lessons of gentleness. This shows that in spite of his attempts at variation, Āśvaghoṣa has betrayed his indebtedness to Kālidāsa. "निगूढज्ञानपौरुषम्" in Sau., I. 52, may have some connexion with Ra., I. 20, "तस्य संवृतमन्त्रस्य गूढाकारेक्षितस्य च । फलानुमेयाः प्रारम्भाः संस्काराः प्राक्तना इव ॥" Similarly Sau., I. 56, "यस्मादन्यायतस्ते च कञ्चिन्नाचीकरत्करम् । तस्मादल्पेन कालेन तत्तदप्युपुरन् पुरम् ॥" may have been suggested by Ra., I. 18, "प्रजानामेव भूत्यर्थं स ताभ्यो वलिमग्रहीत् । सहस्रगुणमुत्सृष्टमादत्ते हि रसं रविः ॥"

The last verse of Saundarananda, canto I, "शाखाखान् विनयवान् नयवान् क्रियावान् धर्माय नेन्द्रियसुखाय धृतातपयः । तद्भ्रातृमि परितु स जुगोप राह सक्न्दनो दिग्मिवावुसृता मरद्भिः ॥" has certain resemblances, in words, ideas or allusions, to three consecutive verses in Raghuvamśa, canto I (24-26) "प्रवानां विनयाधानाश्च यथाह्वयादपि । स पिता पितरस्तासां केवल जन्महेतवः ॥ स्थित्यै दण्डयतो दण्ड्यान् परिणेतु प्रसूतये । अप्यर्थनामौ तम्यास्ता धर्म एव मनीषिणः ॥ दुदोह गो म वशाय श्वाय मयवा विचम् । सम्पद्दिग्मियेनामौ दधनुर्भुवनप्रथम् ॥" It should be noticed that the order has been preserved by Aśvaghosa.

Before I pass on to the next canto of the Saundarananda, I must draw the attention of my readers to a particular feature of these resemblances. One may object about my inferences that such coincidences are natural when there is agreement in the subject-matter and they do not necessarily imply borrowing. But would resemblances extend so far and be also almost in the same order without a genetic connexion? I have shown that some passages in Aśvaghosa can be explained only in the light of Kālidāsa's words. Kālidāsa therefore must have written first. Then the pre-history of the Śākya's and their wanderings in the forest (the subject-matter of Śru, I) which gave occasion to Aśvaghosa to write those passages resembling Ra, I, properly form no part of his real story. His main theme is the conversion of Nanda, half-brother of the Buddha, and all that is directly connected with it—including Nanda's birth and ancestry. What comes before canto II is therefore irrelevant. But Kālidāsa is writing the whole history of the Raghus and he must start from the very beginning. Then, his sending of the king Dilipa to the forest has an artistic significance¹ and is intimately connected with the poet's own deep love of nature.

Let us now proceed with the second canto of the Saundarananda. We notice the similarity of verse 4, "वपुष्मांश्च न च छन्दो दृष्टिषो न च नार्यवः । वेजसी न च न चान्त कर्ता च न च

¹ The greatest prince in the line is Rama. He had to live long in the forest before he became king. Dasaratha obtained Rāma after hunting in the woods. Dilipa's forest life for progeny at the beginning of the story prepares us for all this.

विस्मितः ॥” with Ra., I. 21-22 “ जुगोपात्मानमत्रस्तो भेजे धर्ममनातुरः ।
 अगृधु राददे सोऽर्थमसक्तः सुखमन्वभूत् ॥ ज्ञाने मौनं क्षमा शक्तौ त्यागे रलावाविपर्ययः ।
 गुणा गुणानुबन्धित्वात्तस्य सप्रसवा इव ॥.” It is difficult to avoid connect-
 ing v. 6, “ यः पूर्वं राजभिर्यातां यियासुधर्मपद्धतिम् । राज्यं दीक्षामिव वहन्
 वृत्तेनान्वगमत्पितृन् ॥” with Ra., I. 17, “ रेखामात्रमपि जुगणादा मनोवर्त्मनः
 परम् । न व्यतीयुः प्रजास्तस्य नियन्तुर्नेमिवृत्तयः ॥” and the next verse, “यस्य
 सुव्यवहाराच्च रक्षणाच्च सुखे प्रजाः । शिथिरे विगतोद्वेगाः पितुरङ्कगता इव ॥”
 with Ra., I. 24, “ प्रजानां विनयाधानाद्रक्षणाद् भरणादपि । स पिता पितरस्तासां
 केवलं जन्महेतवः ॥”; Sau., II. 7 seems an almost exact but none-
 the-less a puritanic paraphrase of Ra., I. 24. One verse of the
 Raghuvamśa (I. 28) “ द्वेप्योऽपि सम्मतः शिष्टस्तस्यार्तस्य यथौपधम् । त्याज्यो
 दुष्टः प्रियोऽप्यासीदङ्गुलीवोरगच्छता ॥” seems to have supplied matter to
 two verses of the Saundarananda, II. 22-23, “ (आकृच्छत् वपुषा दृष्टीः
 प्रजानां चन्द्रमा इव) । परस्वं भुवि नामृच्छत् महाविपमिवौ (वो) रगम् ॥ नाकृच्छत्
 विषये तस्य कश्चित् कैश्चित् कश्चित् क्षतः । ¹ अदिच्छत् तस्य हस्तस्यमार्तेभ्यो
 ह्यभयं धनुः ॥.” I cannot help thinking that Āśvaghoṣa wrote the
 second verse “नाकृच्छत्” because the other ideas connected with
 उरग (क्षत and आर्त) in Kālidāsa’s verse could not be given a
 place in Sau., II. 22. *This passage ought to decide Āśvaghoṣa’s debt to Kālidāsa.* The first half of Sau., II. 22,
 may have been suggested by Ra., I. 46, “ काप्यभिख्या तयोरासीद्
 व्रजतोः शुद्धवेशयोः । हिमनिर्मुक्तयोर्योगे चित्राचन्द्रमसोरिव ॥.” In Sau.,
 II. 53, “सूर्यरश्मिभिरङ्गिष्ठं पुष्पवर्षं [:] पपात खात् । दिग्गवारणकराधृताद् वनाच्चैत्रर-
 थादिव ॥,” there may be some influence of Ra., II. 60, “तस्मिन् चण्डे
 पालयितुः प्रजानामुत्पश्यतः सिंहनिपातमुग्रम् । अवाङ्मुखस्योपरि पुष्पवृष्टिः पपात
 विद्याधरहस्तमुक्ता ॥,” though, of course, one cannot be sure. But
 Sau., II. 54, “दिवि दुन्दुभयो नेदुर्दीव्यतां मस्तामिव । दिदीपेऽत्यधिकं सूर्यः
 शिवश्च पवनो ववौ ॥” has too much in common with Ra., III. 14,
 “दिशः प्रसेदुर्मस्तो ववुः सुखाः प्रदक्षिणाचिर्हविरग्निराददे । बभूव सर्वं शुभशंसि
 तत्क्षयं भवो हि लोकाभ्युदयाय तादृशान् ॥” to allow of chance coinci-
 dence. In Sau., II. 58, “दीर्घबाहुर्महावृक्षाः सिंहांसे वृषभेक्षणः । वपुषाभ्येण
 (यो नाम सुन्दरोपपदं दधे) ॥” is noticeable persistent influence of

¹ The reading क्षतः of the paper manuscript conveys no sense and the editor seems justified in preferring the reading of the palm-leaf manuscript.

Kālidāsa, in spite of a conscious effort at variation, of Ra., I 13, "मूढोरस्का वृषस्कन्ध शालग्रामेहाभुव (घामकमपम वर पात्रो धम इवाधित) ॥" Or, may we think that the variation in Aśvaghosa is due to wrong memory?

After Aśvaghosa had written two cantos, flow must have set in in his style, and his obligations to Kālidāsa diminish after this. But the seventh verse of canto 4, "तं सुन्दरं च धर्मेन नन्व सा वा निर्येत न त नतम् । इन्द्र भुव तद् विकल न शोभेतान्योन्यहीनाविप रात्रिषट्त्रौ ॥" has a sure genetic connexion with Ra., VII 11, and Ku., VII 66 "परस्परं स्पृष्टोऽशोभ न चदिदं इन्द्रमपोजयिष्यन् । शक्तिं हवे रूपविधानयत् पशु प्रजानां वितयाऽभविष्यन् ॥" That Kālidāsa is original is proved by the fact that the idea recurs again and again in his works so much so, that it seems to have been connected with the poet's own philosophy of life. Compare Ra., I 33, "तस्यामात्रादुत्पाद्यामात्रमन्मसमुत्सुक etc.," Ku., I 18, "मेनां सुनीनामपि माननीयाम् ग्रामानुरूपं विधिनापयेमे" and Śukantadī V "त्वमन्तामप्रमा स्मृतोऽसि न शकुन्तला मूर्तिमयी सन्निध्या । समानय सुलभगुणं वपुर्वर चिरस्य वाप्य न गत प्रजायति ॥" The and other similar passages in Kālidāsa make one infer that the poet had personal experience of the blessings of an *anurūpa* wife. To continue, the first line of Śu., IV 8, "कन्दर्पोरिव लक्ष्मभूतम् (प्रमोदनान्वारिव नीडभूतम् । प्रहर्षनुष्यारिव पात्रभूत) इन्द्र सहारम् मदाधृतम् ॥," may have been suggested by the verse following Ra., VII 14 quoted above, viz., "रतिमयी नूनमिमावभूत (राज्ञां सहस्रेषु तथाहि बाढा । तवयमात्रप्रतिरूपमव मनो हि जन्मान्तरसहतिष्ठम् ॥)" Passing on to Śu., IV 42, "त गौरव उदमत चक्षुः भावापुराण पुनराचक्षुः । संविश्रयाद् नापि ययौ न तस्यो तस्मिन्नेष्विव राजहम ॥" may seem to be the model of Kālidāsa's famous "त वीक्ष्य वेपथुमती सरसा-द्रवतिर्निषेपयाय पदमुद्धतमुद्धन्ती । मार्गाच्छलन्तिकराङ्गितेव सिन्धु शैलाधिरा-

¹ Of the উনার গিড়ি বুধার পাড়া type as we would put it in Bengali. It is a bull's shoulder and not a lion's that can be an object for comparison. Aśvaghosa has made Vanda have the shoulders of a lion and the eyes of a bull. Kālidāsa does not mention the eyes of Dilpa but his shoulders are likened to those of a bull. Poor Aśvaghosa attempted variation but betrayed his plagiarism.

² My friend Pandit Narayana Sastri, Khaste of Benares would probably have me add here Me II 54, "त मन्त्रेण वपुर्वरं च त विदुः सा विप्रस्य

जतनया न ययौ न तस्थौ ॥” (Ku., V. 85) as the editor of the Saundarananda probably believes.¹ But when we turn to the Buddhacarita we find Aśvaghoṣa trying to introduce the famous expression “न ययौ न तस्थौ” in an unhappy setting. The tenth canto of the Buddhacarita begins with a description of the Prince’s entrance into Rājagṛha and we have a verse here, “गाम्भीर्यमोजश्च निशम्य तस्य वपुश्च दीप्तं पुरुषानतीत्य । विसिस्त्रिये तत्र जनस्तदानीं स्थाणुव्रतस्येव वृषध्वजस्य ॥” (Bu., X. 3). The simile in the last line, to have any meaning, must refer to something well-known. But it is not well known that Śiva was “the cynosure of neighbouring eyes.” I cannot therefore help inferring that Aśvaghoṣa was alluding to Kumārasambhava, VII. 51, “तस्योपकण्ठे घननीलकण्ठः कुतूहलादुन्मुखपौरुषः । स्ववाणचिह्नादवतीर्य मार्गादासन्नभूष्टमियाय देवः ॥,” where Śiva attracts peoples’ eager eyes, because he is a bridegroom coming to marry. But our author is then reminded, by the association of ideas, of Ku., V. 84, “इतो गमिष्याम्यथवेति वादिनी चचाल बाला स्तनभिन्नवल्कला । स्वरूपमास्थाय च तां कृतस्मितः समाललम्बे वृषराजकेतनः ॥” and he cannot resist the temptation of once more imitating the famous expression “न ययौ न तस्थौ” in the following verse of Kumāra (V. 85) and he forcibly brings it in in his next verse, “तं प्रेक्ष्य योऽन्येन ययौ स तस्थौ यश्चात्र तस्थौ पथि सोऽन्वगच्छत् । द्रुतं ययौ यः सदयं सधीरं यः कश्चिदास्ते स स चोत्पपात ॥.” The fact that न here belongs to another word and the second न had to be substituted by स (:) shows the effort of Aśvaghoṣa. “तं प्रेक्ष्य” in Aśvaghoṣa, it should be noticed, corresponds to Kālidāsa’s “तं वीक्ष्य.” I have no hesitation therefore in concluding that Sau., IV. 42, has been suggested by Ku., V. 85, a conclusion in which I am confirmed by the fact that its last line, “तरंस्तरङ्गेष्विव राजहंसः” is rather inappropriate: the swan when *swimming* through the waves does not seem stationary. *This passage is thus decisive in showing Aśvaghoṣa’s posteriority.*

Any further resemblance with the Raghuvamśa I have not noted yet, but I suspect that a detailed comparison may reveal

¹ Preface, p. v.

been suggested by canto IV of the *Saundarananda* (particularly verse 34, “नाहं यियासोर्गुरुदर्शनार्थम् अर्हामि कर्तुं तव धर्मपीडाम्। गच्छार्यपुत्रैहि च शीघ्रमेव विशेषको यावदयं न शुष्कः ॥”), because Kālidāsa has not informed us ere this of Kāma’s having been called away from Rati’s presence only after he had painted her right foot.¹ But that conclusion is barred by the exact nature of the parallelism between Ku., IV. and Sau. VI, indicated above, and by the two or three decisive cases of Āśvaghoṣa’s obligation to Kālidāsa mentioned already. I therefore suppose that Āśvaghoṣa himself derived some suggestions from Ku., IV. 19, for his own story and he made his hero leave his beloved when she had just painted her cheeks.² Similarly there may be some influence of Raghuvamśa, canto VIII (*Aja-vilāpa*), over the seventh canto of the *Saundarananda*, where Nanda laments over his separation from Sundarī.

In the *Saundarananda*, Āśvaghoṣa speaks of some princes, believed to have been descended from the Ikṣvākus, and it is natural that he should turn to the Raghuvamśa of Kālidāsa which describes the early Ikṣvākus. My studies have led me to the conclusion that Āśvaghoṣa had before him the Kumārasambhava of Kālidāsa, when he next took up the *Buddhacarita*. The reason is not far to seek: both Śiva and Buddha are *māra-jits*, i.e., conquerors of Māra, with this difference that Āśvaghoṣa’s hero conquers Māra for ever and does not come under him again as Śiva does—we have therefore a simile here of the अधिक

¹ Nor does Kālidāsa tell us in the third Act of *Śakuntalā* of the incident about the deer (*Dirghāpāṅga*) *Śakuntalā* refers to in the fifth. He was the least prosaic of poets.

² Kālidāsa makes Kāma dye the feet of Rati with lac, but our puritanic author would improve by making Sundarī paint her cheeks and that herself. But is it an improvement? Tradition has it that when Jayadeva had written, “स्तरगरलक्ष्ण्डनं नन गिरसि नण्डनं देहि पदपद्मनुदारम्” his piety began to torment him and the poor Brahmin felt constrained to pen through the line “देहि पदपद्मनुदारम्” but the Lord, so the story says, Himself came in Jayadeva’s absence and re-wrote what Jayadeva wanted to remove. But, of course, these are ideas of a different plain of thought.

class.¹ Though Asvaghosa mostly used the Kumārasambhava when writing the Buddhacarita, the Raghuvamśa was not altogether forgotten. I give below my reasons for this view.

We have references to the Kālīdāsa in verses 3 and 21 of the first canto of the Buddhacarita in not very happy settings and they seem to suggest that Kālīdāsa has been unnecessarily mentioned only because the author was thinking of the Lord of Kālīdāsa, described in the Kumārasambhava, the second half of v. 21, "सर्वत्र भक्तोऽपि हि चन्द्रपादा भ्रमन्ति कैलासगिरौ विशेषम्" is particularly suggestive. But these references are not decisive and I do not want to press them. But verse 11 of the same canto, "भुजेन वस्त्राभिहता पतन्तो दिग्द्विपेन्द्रा समराशयेषु। उद्दान्तमुका प्रकरे सितेभिर्मन्दवे वृष्णाञ्जलिनि प्रयेषु ॥" certainly suggests Kumārasambhava, I. 6, "यद्दुपात्तसुतिप्रोत्तरक वस्त्रिद्वयपि इतद्विपानाम्। विदन्ति मार्गं मसरप्रमुक्तैर्मुकाफलं केसरिणा क्लृता ॥" The fact that Kālīdāsa speaks of actual elephants and actual *gojamotis* and Asvaghosa figuratively of enemy-kings as elephants and of pearls in their crests as *gojamotis* conclusively proves that Asvaghosa was influenced by Kālīdāsa and not the other way. *Udvānta* in Asvaghosa is inappropriate and seems to be simply due to Kālīdāsa's *multair*. [In verse 22, "मायापि च कुचिगतं वपाना विद्युद्विलास जलदायलाय। दानाभिर्वै परितो जनाना दारिद्र्यताप समपाङ्गमर ॥" we may have some influence of Ra., III. 12, "कुमारभृत्याकुण्डलैरुद्धिते निपन्मिरासैरथ तर्पयन्मयि। पवि प्रवीत प्रसवे मुक्षीं प्रियं ददर्श बाले दिवमन्त्रितामिव ॥" and may be, also of Ra., I. 18 c, d, "सहस्रपुष्पमुक्तादुमादत्ते हिरस रवि"] It is true

¹ I am glad to quote the following from Mr. Dhanapati Banerji. Asva Ghosha has another sin., at Kalidasa in a different place. Śiva succumbed to the influences of Mara or Madana. But Buddha could not be subdued and Mara wonders at the fact. This is certainly an improvement according to Asva Ghosha. It seems that Bharavi took his revenge on Asva Ghosha for in his epic, not only the tempters fail to overcome Arjuna but are themselves overcome. These elaborations in my opinion settle the chronology of the poets beyond any doubt. (Q. J. M. S. A. p. 88). The story in the Sūtrālaṅkāra of Asvaghosa (pp. 263-73) about the tussle of Upagupta with Mara, preserved in the Divyavadāna shows the influence of the Kumārasambhava, in that Buddha is there said to have tolerated Māra

that there is nothing in the Tibetan and Chinese versions of the Buddhacarita corresponding to the first 24 verses of Cowell's Sanskrit text,¹ but we should not conclude on that account the late date of this portion, for the Chinese version is throughout much shorter than the Sanskrit text and leaves out a good deal of important matter; the same may be also true of the Tibetan rendering.² Verses 25 and 26 of the Buddhacarita, "ततः प्रसन्नश्च बभूव पुण्यस्तस्याश्च देव्या व्रतसंस्कृतायाः । पार्श्वसुतो लोकहिताय जज्ञे निर्वेदनं चैव निरामयं च ॥ ग्रातः पयोदादिव तिग्मभानुः समुद्धवन् सोऽपि च मातृकुक्षेः । स्फुरन्मयूखैर्विहितान्धकारैश्चकार लोकं कनकावदातम् ॥" have a strong resemblance with Ku., I. 23-24, "प्रसन्नदिक् पांसुविक्रवातं शङ्खस्वनानन्तरपुष्पवृष्टि । शरीरिणां स्थावरजङ्गमानां सुखाय तज्जन्मदिनं बभूव ॥ तथा दुहित्रा सुतरां सवित्री स्फुरत्प्रभामण्डलया चकासे । विदूरभूमिर्नवमेघशब्दादुद्धिन्नया रत्नशलाकयेव ॥" and Ra., III. 14, "दिशः प्रसेदुर्मस्तो ववुः सुखाः प्रदक्षिणार्चिर्हिराभिराददे । बभूव सर्वं शुभशंसितक्षयं भवोहि लोकाभ्युदयाय तादृशाम् ॥"; of course, who is the borrower, Āśvaghoṣa or Kālidāsa, cannot be decided in the present case. We have another resemblance between Bu., I. 28, "सुरप्रधानैः परिधायमाणो देहांशुजालैरनुरक्षयंस्तान् । सन्ध्याभ्रजालोपरि संनिविष्टं नवोदुराजं विजिगाय लक्ष्म्या," and Ku., I. 25, "दिने दिने सा परिवर्धमाना लब्धोदया चान्द्रमसीव लेखा । पुपोप लावरायमयान् विशेषान् ज्योत्स्नान्तराणीव कलान्तराणि ॥" In Bu., I. 32, "स हि स्वगात्रप्रभयोज्ज्वलन्त्या दीपप्रभां भास्करवन्मुमोप । महार्हजाम्बूनदचास्वर्णौ विद्योतयामास दिशश्च सर्वाः ॥" we have the influence of Ra., III. 15, "अरिष्टशय्यां परितो विसारिणा सुजन्मनस्तस्य निजेन तेजसा । निशीथदीपाः सहसा हतत्विपो बभूवुरालेख्यसमर्पिता इव ॥" and Ra., X. 68, "रघुवंशप्रदीपेन तेनाग्रतिमतेजसा । रचागृहगता दीपाः प्रत्यादिष्टा इवामवन् ॥" both suggested probably by "प्रभामहत्या शिखयेव दीपस्त्रिमार्गयेव त्रिदिवस्य मार्गः । संस्कारवत्येव गिरा मनीषी तथा स पूतश्च विभूषितश्च ॥" of the Kumārasambhava (I. 28); in "पाण्डरमातपत्रम्" of Bu., I. 37 c too we may have the influence of "शशिप्रभं छत्रम्" of Ra., III. 16 d. The fortieth verse of Buddhacarita, Canto I, "यस्मिन् प्रसूते

¹ Cowell's Buddhacarita, p. 4, n. 1.

² I tried to secure some information about the Tibetan translation but I did not succeed.

गिरिराजकीटा याताइता नीरिव भूषण्ड । मधन्दना चोत्पलपद्मगर्भा पपात
 वृष्टिर्गगनावनम्रा ॥" has two verbal agreements (in the same order)
 with Kumārasambhava, I 16, "प्रयातनीलोत्पलत्रिविंशेपमपीतविप्रचि-
 तमायताक्ष्या । तथा गृहीत तु गृणाहनाम्यस्तो गृहीत तु गृणाहनाभि ॥" and
 agreement in thought with Ku, I 23 b, "शङ्खस्त्वानन्तरपुष्पवृष्टिः" It
 should be noted that in Aśvaghoṣa's verse we have an unusual
 conceit, the coming down of bbes and lotuses, both water flowers,
 from the heaven, which could have been suggested only by the
 उपल of Kumārasambhava, I 46, coming after वात in the same
 verse and utilised by our author in the second line. When
 Aśvaghoṣa had written the first half of the verse, his own words
 गिरिराज and वात probably suggested to him the beautiful verse
 in Kumārasambhava, (I 46) describing the eyes of Gīrājā's
 daughter and also the one (I 23) describing the effects of her
 birth. So much was our author's imagination haunted by the
 beautiful verses of the popular poet that in the next verse (Bu, I
 41), "वाता यवु स्पर्शसुखा मनाज्ञा दिव्यानि वातास्त्ररातयन्त । सूर्यं स
 एवाम्यधिकं चकारे जज्याल सोम्याचिरनीरितोऽस्ति ॥" he put in
 some of the unutilised ideas of Ra, III 14, "दिशु प्रसदुर्मदतो यवु
 सुखा प्रदक्षिणाचिर्हविरग्निराददे । बभूव सूर्यं शुभसति तदवयव भवो हि
 लोकान्मुदकाय तादृशम् ॥" The following verses of the Buddhacarita
 are but continuations of these ideas

We also notice in Bu, I 15, अचिरं कल्पस्यैवमुदङ्गतीर्त्तव्या
 मुकुन्दामुरगदिभिः । स्त्रीणां चतुर्दण्डभूषितानां विसर्जित चोभयपार्श्वतस्तत् ॥,"
 some verbal agreement with 1 verse in Kumārasambhava,
 ("विद्वित्कवणत्किन्नरमभ्युवास" I 54), and agreement in thought
 and language with Raghuvamśa III 19, "सुलभस्य मङ्गलतूर्यनिस्सना
 प्रमोदतूर्य सह वारयेपिताम् । न केवलं सत्तमि मागधीयते पथि व्यजम्भन्त
 दिवौकसामपि ॥" It is possible that the introduction of Asita
 Devala's prophecy of the Prince's future greatness was suggested
 by Nārada's prophecy of Pārvatī's marriage with Śiva in the
 Kumārasambhava but of course one cannot be sure for the story
 recurs in the other biographies of the Buddha. Aśvaghoṣa's
 borrowing is, however, rendered possible by the fact that the
 other biographies of Buddha are not earlier than Aśvaghoṣa's

Buddhacarita.¹ In any case, some influence of Kumārasambhava, I. 50, “तां नारदः कामचरः कदाचित्कन्यां किल प्रेक्ष्य पितुः समीपे । समादिदेशैकवधूं भवित्रीं प्रेम्णा शरीराद्धहरां हरस्य ॥,” over the concluding verse of the Asita Devala episode, “अथ सुनिरसितो निवेद्य तत्त्वं सुतनियतं सुतविक्रवाय राज्ञे । स बहुमानमुदीक्ष्यमाणरूपः पवनपथेन यथागतं जगाम ॥” (Bu., I. 85), where Asita is made to fly through space like Nārada (a real denizen of the celestial regions) is just possible.² The passage in the Buddhacarita (I. 46—51) culminating in “तस्मात्प्रमाणं न वयो न कालः कश्चित्कचिच्छ्रैष्यमुपैति लोके । राज्ञामृषीणां च हितानि तानि कृतानि पुत्रैरकृतानि पूर्वैः ॥” may have been suggested by “पुराणमित्येव न साधु सर्वं न चापि काव्यं नवमित्यवयम्” in the Prologue of the Mālavikāgnimitra; but I am not sure on the point. Again in Bu., I. 70, “अप्यचर्यं मे यशसो निधानं कचिद्ध्रुवो मे कुलहस्तसारः । अपि प्रयास्यामि सुखं परत्र सुप्तेऽपि पुत्रेऽनिमिषैकचक्षुः”, we notice some influence of Raghuvamśa, III. 17, “निवातपद्मस्तिमितेन चक्षुषा नृपस्य कान्तं पिवतः सुताननम् । महोदधेः पूर इवेन्दुदर्शनाद् गुरुः ग्रहर्षः प्रबभूव नात्मनि ॥ ;” and in Bu., I. 87, “नरपतिरपि पुत्रजन्मतुष्टो विषयमतानि विमुच्य बन्धनानि । कुलसदृशमचीकरद्यथावत्प्रियतनयं तनयस्य जातकर्म ॥,” an improvement over Ra., III. 20, “न संयतस्तस्य बभूव रक्षितुर्विसर्जयेद्यं सुतजन्महर्षितः । ऋणाभिधानात् स्वयमेव केवलं तदा पितृणां

¹ The Lalitavistara, despite the view of some to the contrary, must be placed after the Buddhacarita, the Mahāvastu contains much that is very late and the Pāli Nidāna Kathā probably belongs to the fifth century A.D.

² “अथ सुनिरसितो नरपतिः सार्धं नरदत्तेन भागिनेयेन राज्ञः स इव गगणतलाद्भुगगम्य समुत्प्लुत्य येन कपिलवस्तु महानगरं तेनोपसहृन्नामुपसंरन्त्य अद्विं प्रतिष्ठित्य पद्मभानेव कपिलवस्तु महानगरं प्रविश्य, etc.” in the Lalitavistara (Lefmann's edition, p. 102) proves nothing, for that work is later than the Buddhacarita and has the additional defect of belonging to the Lokottaravāda school so notorious for its exaggerations. By “कामचरः” Kālidāsa may have meant simply ‘passing at his pleasure by that way,’ (यदृच्छया चरन्) and not ‘able to roam anywhere at will,’ but there was nothing to prevent Āśvaghoṣa from understanding a reference to the celestial flight of Nārada which Kālidāsa certainly believed in. Asita Devala was a mortal, and power to fly would be attributed to him only in very late times, and this makes me infer the influence of Kālidāsa in Āśvaghoṣa's story. Post-Āśvaghoṣean writers would but follow him, adding their own elaborations.

मुमुचे स वन्दनात् ॥ ' Lastly the ninety third verse of Buddhacarita, canto 1, 'अस्वप्नप विप्रास शक्त्यरात्रौ भव इव पणमुल्ल जन्मना प्रतात । इदमिदमिति हर्षपणवशो बहुविधपुष्टिपशम्कर व्ययत् ॥,' shows Asvaghosa's acquaintance with the Kumārasambhava story and with the text of Ra., III 23, उमातृपादौ शरज्जन्मना यथा यथा ज्यन्तेन शचीपुन्दरी । तथा नृप सा च सुतेन मागधी ननन्दतुल्यसरोन दससौ ॥ "

After the first canto of the Buddhacarita the influence of the Kumārasambhava and the Rāghavamsa diminishes, but it does not disappear altogether. In Bu., II 26, "यस्योपरं नाम यतोविशटा तुल्याभिधाना धियमातुहाय" we may read some influence of Ku., I 18 मेनो मुनीनामपि माननीयामात्मानुकरा विधिनारयेमे "

and Ra., I 33 तस्यामात्मानुकरायाम् and in the following verse "अथापर भूमिपते प्रियोज्य सनत्कुमारप्रतिम कुमार । सार्धं तथा शक्त्यनरे इवप्या शय्या सहसाच इवाभिरमे ॥ ' the influence of the verse following Ku. I 19 १७, काङ्क्षमेवाथ तयो प्रवृत्ते स्वरूपयोगे सुरप्रसङ्गे

Does not Asvaghosa remind us of his deep acquaintance with the Kumārasambhava of Kalidasa, in Bu., II 30, कलैर्हि धात्रीकरदकलैर्नारीकराग्रभिहृत्तन्द्रे । वराहसरोनृपवर्मत्र दूष्यै किलासवत् तद्वचन रत्न ॥ ? But the two following verses of our Buddhist monk, "वाग्भि कलाभिर्द्विजैश्च हारैर्मदे सत्तेजैर्मधुरैश्च दासै । च तत्र भार्या समर्गवभूषुर्भुञ्जिन्त्यनिरिचिरे ॥ ततश्च कामाग्रपण्डितानि श्रीभिर्गृहीतो रतिकर्षाभि । विमानदृष्टाच्च यही जगाम विमानदृष्टादिव पुण्यकर्मा ॥", have certainly drawn inspiration from the nineteenth canto of the Rāghavamsa particularly from Verses 16 and 17, तस्य मावरणदृष्टमप्य काम्यवस्तुषु नवेपु सज्जिन । वतमानिरपसूय चकिरे सान्निभुक्तविषया समागमा ॥ अङ्गुलीक्षितरयाप्रतनन भूमिभङ्गकुटिलश्च वीक्षितम् । मेखलाभिरमकृच्च वचनं चक्षुषू प्रशयिनीत्वाय स ॥ विमानदृष्टाच्च महो जगाम" is certainly due to Ra., XIX ?

Kings release prisoners on joyous occasions of *Malavikāgnimitra*, Act I. The successful monarch *Dīpa* (Ra. I 17 27) had no prisoner in his realm whom he could release he therefore had to console himself with the idea that he was himself released from the debt to the ancestors. But the monk Asvaghosa finds room for *Bandha a Mocana*—he makes his *Buddhodana* free himself from the bonds of his own passion

Sufficient has been said already by myself and also by my predecessors, Mr. Dhanapati Banerji, Mr. S. Ray and Mr. K. G. Sankara, about the debt of Āśvaghoṣa to Kālidāsa for Bu., III. 13—24, and I need not add anything more here. Bu., IV. 3, “तस्धुश्च परिवार्येनं मन्मथाक्षिप्तचेतसः। निश्चलैः प्रीतिविकचैः पिबन्त्य इव लोचनैः।” again shows the influence of Kālidāsa ; c.f. Ku., VII. 64, “तमेकदृश्यं नयनैः पिबन्त्यो नार्यो न जग्मुर्विषयान्तराणि । तथाहि शेषेन्द्रियवृत्तिरासां सर्वात्मना चचुरिव प्रविष्टा ॥” and Ra., VII. 12, “ता राघवं दृष्टिमिरापिबन्त्यो नार्यो न...प्रविष्टा ॥” Bu., IV. 4, “तं हिता मेनिरे नार्यः कामो विग्रहवानिति । शोभितं लच्यैर्दासैः सहजैर्भूषणैरिव ॥,” may have been influenced by Ra., VII. 15, “रतिस्मरौ नूनमिमावभूताम् etc.”. Bu., IV. 7, “एवं ता दृष्टिमात्रेण नार्यो ददृशुरेव तम् । न व्याजहुर्न जहसुः प्रभावेणास्य यन्त्रिताः ॥” may have been suggested by Ku., III. 51, “स्मरस्तथाभूतमयुग्ममेतत्रं पश्यन्नदूरान्मनसाप्यधृष्यम् । नालच्यत्साध्वससन्नहस्तः स्वस्तं शरं चापमपि स्वहस्तात् ॥” and Bu., IV. 24-25, “इत्युदायिवचः श्रुत्वा ता विद्धा इव योषितः । समारुरुहुरात्मानं कुमारग्रहणं प्रति ॥ ता भ्रूभिः प्रेक्षितैर्भाविर्हसितैर्लजितैर्गतैः चकुराचोपिकाश्चेष्टा भीतभीता इवाङ्गनाः ॥,” by Ku., III. 52, “निर्वाण-भूयिष्ठमघास्य वीर्यं सन्धुक्ष्यन्तीव वपुर्गुणेन । अनुप्रयाता वनदेवताभ्याम् अदृश्यत स्थावरराजकन्या ॥”. Verses 27—53 of this canto, which describe the various attempts of the damsels to capture the Prince’s heart, show a thorough influence of the nineteenth canto of the Raghuvamśa, but I do not like to bring out the parallelisms here for obvious reasons. Let readers, who may hesitate to accept my statement, compare the two texts and draw their own conclusions, and I doubt not that they will come to my view. I have already spoken of the decisive character of Āśvaghoṣa’s obligation to Kālidāsa for Bu., X. 4. The twenty-third verse of the same canto, “आदित्यपूर्वं विपुलं कुलं ते नवं वयो दीप्तमिदं वपुश्च । कस्मादियं ते मतिरक्रमेण भैक्षाक एवाभिरता न राज्ये ॥,” has an obvious connexion with Ra., II. 47., “एकातपत्रं जगतः प्रसुत्वं नवं वयः कान्तमिदं वपुश्च । अल्पस्य हेतोर्बहु हातुमिच्छन् विचारमूढः प्रतिभासि मे त्वम् ॥” Āśvaghoṣa altered “एकातपत्रं जगतः प्रसुत्वं” because Siddhārtha never ascended the throne and “आदित्य” in the altered first line suggested the change of “कान्तम्” in the second to “दीप्तम्”. We notice in Bu., XII. 117, “ततः स पर्यङ्कमकम्प्यमुत्तमं बबन्ध

सुसारेणभोगविष्टितम् भिनदि तावद्भुवि नैतदासन न यामि तावत् (यावत् ?)
 कृतकृत्यतामिति ॥," the influence of Ku, III. 45, 46, "पर्यङ्कवन्धस्तिर्यक्
 कायमृज्यायत संनमिताभयासम् । वचनवापिद्वयसेनिवेशप्रकुण्डाजीवमिवाकूमध्ये ॥
 भुजङ्गमोदद्वन्द्वकाटाय कथावसच्छत्रिगुणाचम्यम् । कण्ठप्रभामग्नविशेषनीला
 कृष्णत्वच प्रन्धिमतीं दधानम् ॥" We have "पर्यङ्क वन्ध" in the first line
 of Asvaghosa corresponding to पर्यङ्कवन्ध of Kālidāsa's first verse.
 But Buddha could have no connection with a real snake, as his
 predecessor Siva is said to have had in Kālidāsa's second
 verse, we are therefore told in Asvaghosa's second line that
 Buddha's body was coiled so closely as the hood of the sleeping
 serpent—a rather odd concept! The last verse of the canto,
 "ततो यदुमुदमदुलं दिवोक्तो वसतिरे न मृतमणा न पश्चि । न सत्सुपनतवोऽ
 निडाहता कृतामन भगवति निश्चलात्मनि", again shows the influence of the
 Kumārasambhava. The first line says that the gods were pleased
 and we would expect to hear in the second and third lines
 of the joy of nature as well, but we find instead the whole
 nature struck dumb. Does not this suggest the influence of
 those beautiful verses in the Kumārasambhava (III. 41-42),
 "तत्तावद्द्वारागतोऽयं नन्दी वामप्रकाशयितुमेवेव मुखापिर्लोकान्निसङ्घर्षे न
 वापलावेति गयान्मनोर्षात् ॥ निष्कम्पवृक्ष निष्कन्दिरेकं मृदङ्गद्वयं शम्भ
 मृगप्रचारम् । तच्छृत्वनत्काननमेव सर्वं विधायितारम्भमिवावतस्थे ॥ १" The
 next canto of the Buddhacarita describes the would-be
 Buddha's conquest of Mārī. Professor Cowell¹ has suggested
 that Kālidāsa was indebted to this portion of the Buddhacarita
 for some ideas in his Kumārasambhava, canto III. What has
 been said already will make this impossible. But Asvaghosa's
 indebtedness to Kālidāsa is also not certain, the two stories are
 different. One verse, however, 'शैलेन्द्रशूरो मति वेन विद्धो देवोऽपि
 यन्मुरचक्षितो बभूव । न चिन्तयदेव तमेव नाथ किं स्वादचितो न शर स एव ॥"
 (Bu, XIII. 16) clearly shows that the author was thinking of
 the Kumārasambhava, for the story of Kāma's hitting at Śiva
 in the presence of Pīrvati is certainly Kālidāsa's own invention.
 Bu, XIII. 30, 31, "महीधूतो धमशरश्च नागा महागुनेर्विश्रमस्यमाणा ।
 मार प्रलि कोविद्वृत्तना नि शरश्चसुखैव जडुभिरेव ॥ सुद्विधासा विजुगर्षयन्तु

¹ Buddhacarita Preface, xii

सद्धर्मसिद्धयर्थमिव प्रवृत्ताः । मारेऽनुकम्पां मनसा प्रचक्रुर्विरागभावात् न रोष-
मीयुः ॥” may show some influence of Ku. III. 71-72, “तपः-
परामर्शविवृद्धमन्योर्भूभङ्गदुष्प्रेक्ष्यमुखस्य तस्य । स्फुरद्बुद्धिर्चिः सहसा तृतीयादक्षयः
कुशानुः किल निष्पपात ॥ क्रोधं प्रभो संहर संहरेति यावद्गिरः खे मरुतां चरन्ति ।
तावत्स वह्निर्भवनेत्रजन्मा भस्मावशेषं मदनं चकार ॥” Śiva burns Madana
himself. But the passionless Buddha cannot do that; he sits
quiet (v. 33). It is others whose eyes burn with rage (v. 30).
The “अनुकम्पा” (‘compassion’) of the Devarṣis (v. 31) is
inappropriate in the Buddhacarita and can be explained only as
a reflection of the compassionate exclamation of the Maruts in
Kumārasambhava III. 72. Another verse (65) of Buddha-
carita, Canto. XIII, “वमाशिफो धैर्यविगाढमूलश्चारित्र्यपुष्पः स्मृतिबुद्धिशाखः ।
ज्ञानद्रुमो धर्मफलप्रदाता नेत्पाटनं ह्यर्हति वर्धमानः ॥” shows obvious
influence of Ku., II. 55, “इतः स दैत्यः प्राप्तश्रीर्नेत एवार्हति जयम् । विप-
वृत्तोऽपि संवर्धय स्वयं ह्येचुमसाम्प्रतम् ॥”

I have not attempted comparison of the fourteenth and
following chapters of Cowell's Buddhacarita, because they are
nineteenth century compositions. Beal's translation of chapters
14—28 of the Chinese version also seems unsuited for compari-
son on account of its extreme brevity and the many deviations
from the original added to the usual shortcomings of a
translation of a translation. I must, therefore, take leave of the
Buddhacarita, only reminding the readers that the author
again and again used the Kumārasambhava, with whose story
his had something in common, and that he could not shake
off from his memory the Raghuvamśa utilised already for his
maiden *Kāvyā*, the Saundarananda.

Before taking leave of the poems of Aśvaghoṣa I must
once again draw the attention of my readers to the nature of
the above agreements. Some people may say¹ that they only
prove that of Kālidāsa and Aśvaghoṣa one borrowed from the
other but the borrower may well be the former and not the
latter. But a little reflection ought to convince one that the

¹ As my friend Mr. Beni Prasad of our History Department
said when he read some part of this paper in proof.

resemblances conclusively prove Aśvaghoṣa's indebtedness. Apart from the few decisive cases mentioned already, the extent and the limit of his agreements with Kālidāsa show that he came later. It is his first *Kāvya*, the *Saundarananda*, which agrees verbally with Kālidāsa more—and that chiefly at the beginning—than the later work, the *Buddhacarita*. The *Raghuvamśa*, the work of Kālidāsa which the *Saundarananda* resembles so much, is, on the other hand, the maturest production of Kālidāsa, at least from among his poems. Would a poet in the fulness of his powers turn to another writer for drawing inspiration when he could write so long without help? A writer who never before tried his hands at poetry would rather begin with a good model but would discard it when his own powers would begin to develop. When writing the *Buddhacarita*, Aśvaghoṣa is more original and the points of verbal contact with Kālidāsa are much fewer now. We should notice that though the agreement in subject-matter makes him occasionally draw inspiration from the *Kumārasambhava*, he has not forgotten the *Raghuvamśa* which he has already utilised so well. Lastly, the still later *Sūtrāṅkūra*, to judge from the three passages preserved in the *Divyāvadāna* (pp 357-61, 382-1, 430-3),¹ is a first rate work with very little obligation to Kālidāsa. Professor Keith has said² about Kālidāsa that he was a poet "not so much of inspiration and genius as of perfect accomplishment based on a high degree of talent." But in my humble opinion, and I hope in the opinion of all other Indian students of Kālidāsa, the remark is not

¹ The third passage containing a touching story of Aśoka's liberality towards the Saṅgha may have been influenced by the story of Raghu's liberality in Ra. V

My informations about the *Sūtrāṅkūra* are drawn from Huber's preface and French version translated for me by my friend Mr Priyaranjan Sen of the Calcutta University from Nariman's *Sanskrit Buddhism* and from Winternitz *Geschichte und Literatur*

² *Classical Sanskrit Literature* p 33

just.¹ It is our Aśvaghōṣa who can be thus described. Anybody who has ever versified with effort in his school boy days, with models constantly before him, will appreciate the force of my arguments about Aśvaghōṣa's indebtedness.

Aśvaghōṣa finding that he could write well and catch the hearts of people through his *Kāvya*s tried his hands at the other important class of literature, the drama, and we have the Śāriputraprakaraṇa. It is much to be regretted that a complete manuscript of the drama could not be discovered.² But the other fragmentary drama³ found with its manuscript and most probably hailing from the same author⁴ gives us an unexpected light on the condition of the Sanskrit Drama in this period. Their perusal shows us that the regular form of the classical drama had been established by this time.⁵ We have here two Buddhist dramas, but even here the Vidūṣaka appears, and strangely enough, the hetaera too. This proves that Aśvaghōṣa had enough classical models to go by, a conclusion already made probable by the many references to dramatic works in the Mahābhāṣya of the second century before Christ.⁶ After carefully going through the fragments published by Professor Lüders I came to the conclusion that Aśvaghōṣa had before him the Mṛcchakaṭika of Śūdraka. Professor Keith has

¹ I have here the full support of my uncle Rai Bahadur Bipin Bihari Mukherji, a great lover of Kālidāsa.

² Professor Luders has given us an account of the fragments with such extracts as could be made out in the Sitzungsberichte der königlich preussischen Akademie der Wissenschaften for 1911, pp. 388—409.

³ Printed in Luders' Bruchstücke buddhistischer Dramen (Berlin, 1911), pp. 67—89 and Sitzungsberichte d. K. P. Akademie, Berlin, 1911, pp. 409—11. The short allegorical drama in the Bruchstücke, pp. 66-67, is left out of consideration here.

⁴ Keith, Sanskrit Drama, p. 83 (end).

⁵ See *ibid.*, pp. 80—90.

⁶ As also by the now discovered reference to the Vāsavadattā-Nāṭyadhārā of Subandhu, contemporary of Candragupta, and Bindusāra in Abhinavagupta's commentary on the Nāṭya Śāstra (Rangaswami Saraswati in the Proceedings of the Calcutta Oriental Conference, pp. 203—213, and I.H.Q., I. pp. 261—264).

already¹ noticed some resemblances with that drama but my study adds a genetic connexion, the borrower being *Āśvaghoṣa* in this case as well. I have no space here for a full discussion of the question and I reserve that for a separate paper. This *Mṛcchakatika* has been believed by many people to be an early drama and it may belong to the first century before or after Christ, for all that is known.² The tradition contained in the *Avantisundarikathā* of Dandin (7th century A.D.) makes its author *Sūdraka* a contemporary of the Andhra King *Svāti*.³ This Andhra prince may have been either *Meghasvāti* or *Svāti* or *Skandisvām*, and *Sūdraka* should therefore be placed somewhere in the first century B.C., or in the beginning of the following century, and would be anterior to *Āśvaghoṣa*. The *Mṛcchakatika* seems to me to be the work of some court poet (or poets⁴), as the *Ratnāvalī*, the *Nāgānanda* and the *Priyadarsikā* are by Harṣavarmā's court poets.⁵

¹ Sanskrit Drama pp 34-5

My Professor the late Dr T. K. Laddu used to point out some influence of *Kālidāsa* and I believe he was right

² M. R. Kavi in Proceedings of the Calcutta Oriental Conference p 197. See *Avantisandari Kathāśāstra*, Ch IV vv 175 ff. The tradition is repeated in some other works see Keith Sanskrit Drama p 129

³ If श्री मृच्छकटिकम् इति उचितमिति, तस्य मृच्छकटिकम् इति उचितम् * refers to the composition of the *Mṛcchakatikam*. 'मृच्छकटिकम् इति उचितम्' of the *Avantisundarikathā* (pp 1-2) makes the incidents of the *Mṛcchakatikam* resemble some incidents in *Sūdraka*'s own life

⁴ Cf. श्रीमद्विष्णु सायनाचार्य 'मृच्छकटिकम्' in *Āvyaṇṇapraśaṅga* I 2 (see Keith Sanskrit Drama, p 171). *Rudradāman* may have been another king who laid claim to or was allowed to claim the writings of his court poets (Junnagarh Rock Inscription L 14). This interesting inscription shows as the Head of my Department, Professor Dr Acārya emphasises, the full development of Sanskrit literary form by that time. *Kālidāsa* may easily be placed before it. [The usual neglect of the early Sanskrit inscriptions by our students of Sanskrit literature is much to be regretted.]

Some part of the prologue may have been added after the king's death. "सूद्रकोऽसिं प्रविष्टः" may be simply an euphemism for 'Sūdraka died,' but if it must mean suicide, I may cite the parallel of a similar incident of the first century B.C., mentioned by Strabo; among the persons and things sent by King Pandion to Augustus was a gymnosophist who immolated himself in prosperity in Rome.¹ The large number of Prakrits used by the author of the *Mr̥cchakaṭikam* should not necessarily make him late, for no late drama exhibits so many Prakrits as this one, and Bharata's injunctions about the use of different Prakrits for different classes of people presuppose previous usage of this sort.² I do not believe now that the Trivandrum dramas hail from Bhāsa and I do not therefore feel disposed to accept the usual view³ that the *Mr̥cchakaṭika* is based on the *Cārudatta*.⁴ So I make Aśvaghōṣa indebted to Sūdraka

¹ Strabo's Geography XV. 73 (MacCrindle, India as described by Classical Writers, p. 78). An earlier incident of a similar character is on record about Kalanos, contemporary of Alexander.

² The inscriptions of Aśoka show the formation of different Prakrits in different localities as early as the third century before Christ. And the author of the *Ṛk-prātiśākhya* (II. 16) indicates by the names *Prācya-padaṇṭhi* and *Pāñcāla-padaṇṭhi* for the hiatus of *a* after *e* and *o* respectively the presence even in that early age of one characteristic difference between Śaurasenī and Māgadhi.

³ E.g., Keith in Sanskrit Drama, pp. 128, 130.

⁴ This is not the place to discuss the vexed question of the authorship of Pandit Gaṇapati Śāstri's dramas but one thing may be mentioned. Bāṇabhaṭṭa says about Bhāsa "सूत्रधारकृतारम्भेनादिकैर्वहुभूतिका, सप्ततैर्विधे लेने भाषे देवकुलैर्वि", whereas the Trivandrum dramas have no *patākā* in them and hardly any *patākāsthānaka*. The *Cārudatta* is certainly an abridged version of the *Mr̥cchakaṭikam* and not its original. Sajjalaka's humorous statement about the utility of his sacred thread, "नन्विदं दिवा ब्रह्मधूलं रात्री कर्मसूत्रं भविष्यति" in the Third Act of the *Cārudatta* (p. 56), must be containing an allusion to the contrast between the *Pūrvamīmāṃsā Sūtra* and the *Vedānta Sūtra* which can be understood only after Śaṅkara's refutation of the *Jñānakarma-samuccaya* theory. Vasantasena's remonstrance "इदमेवा नानु वदन्ति" after

and not to in earlier Bhāsa. Aśvaghoṣa's preference of the Mṛcchakatikam over the dramas of Kālidāsa may be due to greater acquaintance, the reputed author being a king, or the work being nearer in point of time. A better reason may be in the greater 'aiśaya-rati para' character of Sūdraka's drama. Aśvaghoṣa's purpose was to rescue man from aiśaya-rati and he would best serve his purpose by making his characters begin with enjoyment and end with renunciation, as in the case of the Saundarananda. But the fragments are not sufficient to indicate the total absence of Kālidāsa's influence in the dramas of Aśvaghoṣa. "विदुः—भो धानजय मित्तमिदमिदम्" soon after "अथ स्यादेवम्" for example, in the latter drama of Aśvaghoṣa (fragments 13 and 109 of the Kusān M S)* might suggest the influence of Mālavikāgnimitra, Act II, "देवी—विदुदेवु धनवतो मनसविहिम् । विदुषक —भेदि, विसस्य पाणमोक्षय नुवरावहि ।" The characterisation of the hero (Soma-datta) and his mistress (the hetaira Magadhavati) as *Calravālamithuna* by Dhānashyaya, during their love quarrel, in Frag. 10a 3 and 11a 3) "न मे प्रिय यच्चक्रवाकमिधुनस्य [कलहः?]" etc.) may be due to Śakuntalā, Act III, "नेपथ्ये—यच्चक्रवाकं धामन्ते हि सहस्रं यं यच्चरिषा रक्षणी" It should be remembered that a pair of Calravālas habitually separates everyday, whereas Somadatta and Magadhavati seem to have separated but once. "पारावतमिधुनस्य वृद्धि कथं विप्रहा जत ?" in 10b 3 is more appropriate and this makes me infer the influence of Kālidāsa in the

the Cetiś एव पुनः चरित्तमिधुनस्य वृद्धि कथं विप्रहा जत ? (Cārudatta, Act IV, end) certainly shows knowledge of the descriptions by Vasantasenā and the Vita drawn out to an martistic length in the Fifth Act of the Mṛcchakatikam. The Pushkrodhis are not the only persons in India to challenge Gaṇapati Śāstrī's theory. See Bhāsa another side in the Zeitschrift für Indologie und Iranistik II 247—264 by C Kunhan Raja, another native of Malabar

¹ No quotations from the Mṛcchakatika are needed to establish the point. But one from the Śāstrīpraprakaraṇa will prove of interest (ma)hato / hu amodo ganika/ ute (h. IV r 6 l 3 p 394) Liller's Fruchtstücke p 70 and Sitzungsberichte p 410

expression *Cakravākamithuna*. The meagre character of these tantalising fragments is much to be regretted.

Some people will here object that the dramas of Kālidāsa show a Prakrit much later than the Prakrit of Aśvaghoṣa. This I answer by a question—have we a single manuscript of any of Kālidāsa's works even half as old as the Palm-Leaf Manuscripts of these fragments discovered in Turfan? Thanks to the efforts of the grammarians and the uniform usage throughout India, the Sanskrit language has remained unchanged for centuries and the scribe or the Pandit never requires to alter the Sanskrit text he is copying or using *to his own contemporary or local type*. Not so has been the fate of Prakrit. The Prakrit language had more or less of the vernacular in it and it has changed so much as to make Prakrit of one period or locality almost unintelligible in another. Prakrit manuscripts or Prakrit portions in manuscripts of Sanskrit dramas have therefore suffered hard in the hands of these scribes or scholars, with the result that the same Prakrit text will be found in bewilderingly different forms in different manuscripts. Is not the difference between the Prakrit of the Bengali recension of the Śakuntalā and the Prakrit of its other recensions well known? A glance at the profuse *variae lectionis* at the bottom of any page of Professor Sten Konow's *Karpuramañjarī* will give an ocular demonstration of the great ~~freedom~~ that has been taken with Prakrit texts by transcribers.

P. 111, l. 28

For पढई or पढए instead of the only correct पढदि or पढदे.

read पढदि or पढदे instead of the only correct पढइ or पढए.

down to the regular types recognised by

That an acute philologist like Professor Konow, fully acquainted with the best principles of western text scholarship, had occasionally to abandon the evidence of all his manuscripts for the sake of consistency or agreement with the grammarian's

dicta¹ should make us ponder. I shall therefore hear of any argument about date based on the character of Prakrit only if contemporary manuscripts are compared. *Is it proper to compare the Prakrit of a manuscript written in Kuṣāṇ script² with the Prakrit of our modern manuscripts and draw conclusions about the relative age of their authors?* We should remember that no Prakrit is illustrated by the fragments in the Central Asian script,³ and our information about Aśvaghosa's Prakrit is based on the manuscript in Kuṣāṇ script. There can also be difference of opinion about the antiquity of Aśvaghosa's Prakrit, Professor R. L. Turner, for example, has not seen eye to eye with Professor Keith on the subject.⁴ Lastly I may draw attention to the archaic character of the Prakrit portions of Mahendra-vikrama-varman's *Matta-vilāsa-prahasana*, noticed by Professor Keith himself,⁵ resembling the Prakrit of the so called Bhāsa whom the Professor would not assign the late date of the seventh century. All this proves that the antique character of the Prakrit of a drama depends more on the age of the manuscripts or the province of their circulation⁶ than on the age of the author.

I have shown above that some passages in Aśvaghosa's writings show certain influence of Kālidāsa, and the cumulative effect of the other agreements will certainly support my contention. Kālidāsa is therefore earlier than Aśvaghosa. His writings were also so very popular in the first or second century

¹ Karpūramāñjarī Preface p. xxii

² Luder s. Bruchstücke buddhistischer Dramen pp. 3-11. The concluding sentence 'Auf jeden Fall aber bleiben aus die ältesten Handschriftreste die uns überhaupt aus Indien erhalten sind' should be particularly kept in mind.

³ Luder s. C 1 2 and 4, Sitzungsberichte pp. 390-2

⁴ See his review of Keith's *Sanskrit Drama* in J.R.A.S. 1925 pp. 174-6

⁵ *Sanskrit Drama*, p. 165

⁶ The manuscripts of the Travandrum dramas hail from the extreme south where Prakrit would be best preserved among Prakritic vernaculars.

A.D.¹ even in distant Śāketa, that the monk Āśvaghoṣa, wishing to convey lessons of religion, had to go out of his way and write in the form of Kāvya (and also of Nāṭakas).² This makes Kālidāsa earlier than Āśvaghoṣa by at least a century or two. Why should we then refuse to place Kālidāsa in the first century B.C., the traditional date for our greatest poet, when the presence of a Vikramāditya, King of Ujjayinī, is now seeming to be not impossible?³ I have no faith in tradition unsupported by other evidence, but I accept this particular tradition because there are some indications in favour of its correctness. That the Jain story makes the presence of a Śaka-extirpating Vikramāditya probable in the first century B.C. whose historical and geographical setting it conforms to, does not necessarily place Kālidāsa in that century. But the comparison between Āśvaghoṣa and Kālidāsa has indicated some such date for the latter and his works, particularly the Raghuvamśa, point in this direction, as I shall show below. I believe with most scholars that there is a background of contemporary history and geography in the Raghuvamśa and that

¹ i. e., the date of Āśvaghoṣa, which has to depend on that of Kaniska for Buddhist tradition is unanimous in making him Kaniska's contemporary. Some scholars make Kaniska begin his reign in 78 A.D., and others would have him reign from 120 A.D. I shall not enter into any discussion of this vexed question here nor shall I mention my own preference. It is sufficient for my purposes to suppose that Āśvaghoṣa must have lived about 100 A.D. in either case. His contemporary, Kuṣāṇ king would be Kaniska II according to Mr. R. Kimura (I.H.Q., Sept. 25, pp. 415-422).

² Students of Vedānta Literature will recollect the necessity Madhusūdana Sarasvatī, the author of the Advaitasiddhi, felt for writing in the terminology and form of Navya Nyāya, without which he would not have been heard in Bengal in that age.

³ Rapson in Ancient India, p. 143 and later, in Cambridge History of India, Vol. I, pp. 532-3. I have given below (pp. 146-8n.) two extracts from the C.H.I. on the subject. The legend of Kālikācārya, Gardabhilla and Vikramāditya is contained, besides the Prakrit text published by Professor Jacobi in Z.D.M.G., vol. 34, pp. 258-278 (Vikramāditya mentioned on p. 267), in the Sanskrit Prabhāvakarita of Candraśrī (N.S.P., Bombay, 1909), pp. 36-46, and in the Kālikācārya Kathā published by the Āgamodaya Samiti as appendix to the Kalpa Sūtra (Bombay, 1920).

conclusions about the author's age can be drawn from the work. But others have read this background differently. Though few scientific scholars have placed the Raghuvamśa in the first century before Christ, I do not have heart for the 4th or 5th century theory is not universal. Though some scholars would place Kālidāsa in the reign of Samudra Gupta and Candragupta II, others would make him contemporaries of Kumāragupta or Skandagupta, and some will have him in the time of Yaśodharman. But all these gentlemen follow the same principles and have worked on much the same lines. I therefore venture to attempt below a comparison between the political and geographical settings of the Raghuvamśa and the conditions of the first century B.C., following the self-same method.

The fact that Kālidāsa omits in the sixth canto of the Raghuvamśa some kings described as conquered by Raghu in the fourth and mentions some omitted there shows a purpose and certainly indicates that the two cantos were considerably influenced by contemporary history. In the fourth canto the following countries or peoples are described as conquered by Raghu—"The eastern provinces" (v 34), Sahma (35), Vanga (36-37), Kalinga (38-43), Pāndya (49-50), possibly Kerala (54), Aparānta (59), Pūrāṅkas (60-64), Hānas (68), Kāmbojas (69-70), Mountaineers of Utsavāsanketa (77-78), and Prāgyyotisa (81-84).¹ In the sixth canto the following provinces are represented as sending suitors for Indumati's hand—Magadha (21-25), Anga (27-30), Avanti (31-36), Anūpa (37-41), Śūrasena (45-52), Kalinga (53-58), Pāndya (59-66) and Uttara Kośala (68-79), of course, "चाँव राजास्युत" of v 82 lets us know that there were other princes besides, but as they have not been named, Kālidāsa must have had a reason² for their omission. Kālidāsa does not describe in detail Raghu's conquest of Magadha or Anga but

¹ Not Prāgyyotisa (81-82) and Kāmārūpa (83-84)

² Their want of importance

he slurs over it in only half a verse; his actual words are “*पौर-
स्त्यानेवमाक्रामन् तांस्तान् जनपदान् जयी । प्राप तात्तीवनश्याममुपकण्ठं महोदधे ॥*” The vagueness of expression should be particularly noted. Kālidāsa, therefore, did not want to offend the reigning princes of Magadha and Aṅga. For both he seems to have had great regard, as I shall show below. The only kings who appear on both the lists are those of Kalinga and Pāṇḍya. I shall show that Kālidāsa had some pique against them or at least no love for them.

Let us study the two lists a little carefully and let us proceed canto-wise. The kings of Magadha and Aṅga are mentioned explicitly only in the sixth canto and I may omit them for the present. Suhma and Vaṅga are separately mentioned. They were therefore distinct principalities and were not included in the home province of Magadha which was certainly the case in the Gupta period.¹ In IV. 38, we are told that Raghu marched towards Kalinga, being shown the way by the Utkalas. There was therefore no fight with the Orissans who may have had no separate kingdom in Kālidāsa's time or have been too insignificant for conquest. But Samudra-Gupta “subdued all the chiefs of the forest countries, which still retain their ancient wildness, and constitute the tributary states of Orissa.”² The Red-Arm (foreign?) dynasty reigned in Orissa from 323 A.D. to 474 A.D., after which came the Keśaris who reigned in glory till 1132 A.D.³ But there is a blank before 323 A.D. and Kālidāsa seems to have lived before this date. Kalinga comes next and in discussing its historical bearing I may include the corresponding portion of the sixth canto.

¹ See R. D. Banerji's History of Bengal (in Bengali), Vol. I, Ch. 4 (also ch. 3 for the condition of Bengal during the centuries intervening between the decline of Maurya power and the rise of the Guptas).

² Smith, E.H.I.⁴, p. 300.

³ Hunter's Orissa, Vol. I, pp. 206, 232, and Vaidya's History of Mediæval India, Vol. I, pp. 319, 326.

That the Kalinga chief is mentioned in the sixth canto indicates that Kalinga was a principality of some note in Kālidāsa's time. But his defeat at the hands of Rāgha indicates Kālidāsa's lack of sympathy for the Kalingans. Kālidāsa did not scruple to wound the family pride of the reigning king. Why, he must have had some grudge against him or his family as Rā., VI 58, "प्रलोभिताप्याहृतिटोभनीया विदुर्मराजावराज सयैनम् । तस्मादपावतत दूरदृष्टा नीत्येव लक्ष्मी प्रतिदुर्दवान् ॥," indicates. Not only is the appearance of the king suggested to be non attractive, he is himself likened to adverse fortune, a punishment that our poet has not inflicted on any other unsuccessful suitor. Kālidāsa's attitude may be due to personal reasons—he may have experienced ill-treatment at the hands of the king of Kalinga, or to political reasons—there may have been some long-standing quarrel between the Kalingans and Kālidāsa's own province.¹ Which explanation is more correct is certainly impossible to decide. But if we are permitted to consider the political explanation, some indication of date may be obtained. No political quarrel between Malwa and Kalinga is known in the Gupta period. But such a quarrel is intelligible in the first century B.C. Ujjayini was at that time included within the empire of the Andhras or was closely

¹ I follow MM H P Shastri (J.B.O.R.S. 1915 pp 197 ff) and others in believing Malwa to have been our poet's home. I do not believe in Pandit Manmathanāth's theory of Bengal as the home of Kālidāsa. A Bengali to use an expression of my late colleague at Rangpur Professor Suresh Chandra Dutta Gupta, M.A. would not say "हृदयं वराहस्य" etc (Rā. IV 36). The Pandit's arguments do not stand criticism and non refutation by serious scholars do not make them plausible. "यस्य वराहस्य हृदयं भवति मज्जिमस्योत्तराया उल्लेखः प्रवर्तितुं नारम दूषयति" etc (Me L 28) too to quote another friend Mr Sudhāpān Kumār Sen Gupta M.A. of the same College shows the province of Kālidāsa's love and habitual residence. Lastly even Bengali tradition, as my grandfather Dr Sir C Banerji was emphasising the other day is uniform in associating the name of Kālidāsa with Ujjayini. The statement that the solar calendar has been peculiar to Bengal and that throughout her history shows a lamentable ignorance of facts or wilful neglect thereof. The puerile argument that the name of Kālidāsa is characteristic of Bengal does not even deserve refutation.

connected with them¹ and the Andhras and the Kalingans were neighbouring peoples and rivalry and frequent mutual aggressions would be natural in such cases. One Kalinga king of the preceding century, Khāravela, made much mischief in neighbouring territories and Puṣyamitra² of Magadha (with whom Kālidāsa was certainly in sympathy) and the Andhras and their feudatories, the Rāṣṭrikaṣ of the Marāṭhī country and the *Bhojakas of Berār* (the kinsmen of *Indumatī*, Kālidāsa's heroine) felt the steel of his arms.³ Kālidāsa may have had Khāravela in mind when he likened a remote ancestor of the reigning king of Kalinga to “प्रतिकूलदैव” for the *Vidarbha* princess *Indumatī*. There was hardly any Kalinga kingdom of note in the fourth or fifth century A.D. Samudra-Gupta seems to have marched through the same province but he had to encounter several chieftains and the province was divided into petty principalities.⁴ I would therefore consider Kālidāsa's description truer to the conditions of the first or second century B.C. Ra., VI. 54, “असौ महेन्द्राद्रिसमानसारः पतिर्महेन्द्रस्य महोदधेश्च । यस्य चरत्सैन्य-गजच्छलेन यात्रासु यातीव पुरो महेन्द्रः ॥” with its repetition of *Mahendra*, might suggest to the Gupta period theorists that Kālidāsa was thinking of Mahendra of Kośala or Mahendra (Mahendragiri?)⁵ of Piṣṭapura of Samudra-Gupta's Allahabad Inscription. But such a conclusion is barred by the fact that Hariṣeṇa mentions

¹ C.H.I., I, pp. 531—4.

² If Bahasatimitra of the Hāthigumphā Inscription is identified with Bahasatimitra of the Pabhosā Inscription, the king of Magadha cannot be Puṣyamitra, but must be some successor of his. In any case, he was a Śuṅga and Kālidāsa seems to have been in sympathy with the whole house.

³ Hāthigumphā Inscription of Khāravela, ll. 4, 6, 12 (J.B.O.R.S., 1917, pp. 454—7) ; Rapson, C.H.I., I, pp. 535—7, and Smith, E.H.I., pp. 209, 219.

⁴ Allahabad Inscription, ll. 19-20 (Corpus Inscriptionum Indicarum, Vol. III, p. 7).

⁵ Mahendra according to Jouveau-Dubreuil (A.H.D., p. 59), and Fleet (C.I.I., III, p. 7, n. 2, ll. 34—6). But Professor Dr. Bhandarkar (I.H.Q., I, p. 252) prefers to connect *giri* with *Mahendra* and not with *Kauṭṭhaka*. [But differently G. Ramdas in *ibid.*, 679ff.]

two Mahendras between whom we cannot possibly choose the man Kālidāsa could have referred to and they are both too far removed from the Mahendra hill to be rightly called "पनिर्नादस्य", and the former could not be also called "(पनि) नरादयेव." Besides, a poet of Kālidāsa's type would hardly be so prosaic as to mention Samudra-Gupta's adversary by his real name and not by a synonym. The verse rather suggests to my mind an indirect allusion to the Mahā-Magha-vāhana (= Mahendra) dynasty to which Khāravela belonged.* If Mr Jayawala is justified in identifying these Mahā-Megha-vāhanas with the Purāṇic Meghas of Kosala (whence Khāravela's family certainly came), the dynasty must have passed away in the first century A.D., for the Purāṇas mention only nine kings in the line† and they could hardly reign for more than a little over two centuries.

The next king mentioned as conquered is that of the Pāṇḍvas. Some people, believing in the first century B.C. theory want to make capital of the non-mention of the Pallavas, who reigned in the province between Kalinga and the territories of the Pāṇḍvas from the end of the second century A.D. till the sixth century or as an insignificant power much later. In Samudra-Gupta's time the Pallavas were an important people and Kāśchila-Vishnugupta, whom Samudra-Gupta is represented as having defeated, was certainly a Pallava. In Yuan Chwang's time too the Pallavas were an important power. But I do not feel disposed to draw any conclusion from the non-mention of the Pallavas by Kālidāsa for he also

H.H. Garg, *MS. Inscriptions*, I (J.B.O.R., III, pp. 402, 403, 404). The fact that an inscription of Khāravela (Luders 1347) mentions another king of Kosala, Rudraputra (Luders 1444) as a Vāṇik-pāṇi (= Vaidika-pāṇi) with the name Mahā-Megha-vāhana shows that it was a family epithet. See R.D. Banerji's note in *J.A.S.*, p. 50.

(Pargues D.E.A., p. 31). That Mr. Pargues puts this (and some other dynasties) in the third century A.D. does not go against us for Mr. Jayawala (J.B.O.R., III, p. 44 n.) has shown that some of these dynasties were contemporaneous with the Andhras and that Mr. Pargues has not here understood the Purāṇas correctly.

omits the Colas who were certainly an important power as early as Aśoka's time and as late as the twelfth century A.D. Kālidāsa may have omitted to mention other South Indian states because they were unimportant or because he himself wanted to avoid prolixity. अनाशाखजयः in Ra., IV. 44, as interpreted by Mallinātha and others, may indicate that the southern powers were too insignificant for Raghu's steel. In any case, our poet had not set out to write history and what allusions he makes are only incidental. Kālidāsa has, however, suggested Pāṇḍya to be the most important king of the South in his day : "दिशि मन्दायते तेजो दक्षिणस्यां रवेरपि । तस्यामेव रघोः पाण्ड्याः प्रतापं न विवेहिरे ॥" (Ra., IV. 49), "अनेन पाणौ विधिवद्गृहीते महाकुलीनेन महीव गुर्वी । रत्नानुविद्धार्णवमेखलाया दिशः सपत्नी भव दक्षिणस्याः ॥" (VI. 63). Whether this was deliberate or not is uncertain. If it was deliberate, we have an interesting bit of historical information. South Indian history is still wrapped in great obscurity and full informations about the mutual relations of the three Southern Powers during the few centuries before and after the Christian era are not available. *The historians of South India will kindly investigate the bearing of this fact on the date of Kālidāsa.* I have no choice but to leave the question undecided. But one thing may be mentioned here. We know from Strabo (Bk. XV. 4, 73) that a Pāṇḍya king sent an embassy to Augustus Cæsar in the last quarter of the first century B.C.¹ Similar information is not on record about the two other powers, particularly about Kerala which had a western foreign trade. This may indicate the pre-eminence of the Pāṇḍyas in the first century B.C. That king is represented by Strabo (XV. 73) as laying claim to a suzerainty over 600 princes ; they might mean the numerous Tamil chieftaincies of the three states. It is true that Strabo says the king was Poros and not Pandion according to some writers but the latter should be preferred on *a-priori* grounds,

¹ MacCrindle, *Ancient India*, as described by Classical Writers, pp. 9, 77, and C.H. I., Vol. I. p. 597.

for since Alexander's famous fight with a king Poros, 'Poros' would become the usual type for an Indian prince's name to an uninformed westerner. A Pandion may be mistakenly called a Poros but not the other way. Mr Rawlinson's preference for 'Poros' does not therefore commend itself to me. Could not a Pāndyan sending an embassy to Rome get a letter written in Greek when trade with the west had been established long? Mr Rawlinson's suggestion that the king was a Kāśin monarch, cannot be accepted for no such reigned in India as early as 23 B.C.* The Periplus of the first century A.D. mentions (§54) the Kingdoms of Cerubothra (Kerala putra) and Pandian but we find no mention of the Colas or their kingdom, though two Cola ports (Poduca and Sopatma) are named (§60). Is this not suggestive? One may also recollect here the special mention of the Pāndyas in the extant fragments of Megasthenes.¹ To this may be added the fact that the inscription at Hātūgumphā mentions (l. 13) Khāravala attacking the Pāndya king in the twelfth year of his reign, and the kings of Cola and Cera countries are not mentioned. Immediately after the reference to the despoiling of Anga and Magadha (l. 12) we have this reference to the Pāndya-rāja and there seems to be a summing up of the conquests and the mention of its effect in the following line. We may therefore believe that no portion of the inscription has been lost that made any reference to conquest of, or diplomatic relations with, the Colas or the Ceras. This may justify the conclusion that the Pāndya was the chief power in South India in the second century B.C. Kankāla Cola in the first or second century A.D. may have turned the balance against the Pāndyas for the first time.

I cannot draw any conclusion from the mention of the king of Pāndya as "रगस्यस्य पुत्रस्य नाम्" (Ra, VI 59). That

* India and the Western World p. 103.

¹ See th. E.H.I., pp. 265 ff. C.H.I., I, pp. 80 ff., 702-3.

² MacCrindle Ancient India, as described by Megasthenes and Arrian, pp. 201, etc.

Uragākhyā pura means Nāgapura, as explained by Hemādri or Mallinātha, or Nāgapattan in the Rājamahendry district, as suggested by Nandargikar,¹ is impossible. C. V. Vaidya, in a paper on "The Pāṇdyas and the Date of Kālidāsa,"² identifies "उरगाख्य पुर" ('the city named *Uraga*') with Urai-yūr and infers that Urai-yūr was the Pāṇḍya capital before the Colas under Karikāla conquered the Pāṇḍyas and established their own seat there. But history or legend nowhere records that Urai-yūr ever was a Pāṇḍya capital; the indications are rather just the other way. Leaving out pre-historic times, when North Mañalūr may have been the Cola capital,³ Urai-yūr was certainly the chief seat of Cola Government in the historical period. Karikāla Cola shifted the capital to Kāveripattinam⁴ but before that Urai-yūr must have been the Cola headquarters. But it is not, of course, impossible that a Pāṇḍya was reigning in the first century B.C. at a conquered capital, as Vaidya believes and K. G. Sankara doubts,⁵ but want of facts should deter us from making this assumption. The identification of *Uragākhyā pura* with Urai-yūr I therefore consider as unsuccessful.⁶ Madura, so far as is known, was the earliest Pāṇḍya capital. Mr. Sankara has laid North Indian students under great obligation by informing them⁷ that the Tamil name of Madurā is Alavāy = 'Snake'; *uragākhyā pura*

¹ Raghuvamśa, 3rd ed., Bombay, 1897, notes, p. 123.

² A.B.I., II, pp. 63—8.

³ See V. V. Iyer's interesting paper "The Adventures of the God of Madura" in Indian Antiquary, 1913, pp. 65—72. [Had the legend recorded there any genetic connexion with the story of the Kumārasambhava?]

⁴ S. K. Aiyangar, Ancient India, p. 93.

⁵ A.B.I., II, pp. 189—191.

⁶ But Mr. Sankara's objection that *ākhyā* shows that *uraga* or *uraya* could not be the first part of the name—as *gajasāhvaya* means Hastināpura and not Gajapura—is not convincing. We say *gajasāhvaya pura* and not *gajāhvaya pura* in the case of Hastināpura, and we have on the other hand cases like कपिलावस्तु for Kapilāvastu, e.g., in Buddhacarita (I. 94) and Lalitavistara (ed. Lefmann, Vol. I., pp. 101, 113).

⁷ In the paper in A.B.I., cited above.

can therefore be none other than this famous city Kālidāsa shows himself in Ra., IV 49—50 and VI 60—65 as well acquainted with the Pāndyas and he must have travelled widely in that land, this bit of local touch may be due to the knowledge thus obtained. In spite of phonetic resemblance we should set aside Mr Vaidya's equation and prefer Madurā as the Pāndya capital meant by Kālidāsa, especially when Raghu enters the Pāndya territory long after crossing the Kāveri (Ra., IV 47) on whose bank Urayūr certainly was. Urayūr or Madurā, "उरगव्यूर," gives us no help for date. But does non-mention of Pāndya patronage of letters in the sixth canto of the Raghuśmṛti (as in the case of the king of Anga, Ra., VI 29) indicate that Kālidāsa lived before the age of the famous Tamil Sangam?*

After conquering the Pāndyas, Raghu proceeds towards the western coast. Whether Verse 54 (भयान्मृदुविभूषणां तेन चेरद्वये विनाम् । अटकेषु समरेषु दुर्व्यप्रतिनिधीतम् ॥) indicates in actual fight with the Keralans or mere passage through their territory is not certain. Verse 58 tells us that the king of Aparānta yielded tribute to Raghu. We are familiar with this name in the inscriptions of Aśoka. Scholars who believe that Kālidāsa's description of Raghu's *dig-vijaya* is based on the conquests of the Gupta kings could seek for the parallel to this conquest of Aparānta in Samudra-Gupta's conquest of Devārāstra = Mahārāstra. But Jouveau Dubreuil² calls into question the identification of Devārāstra mentioned in the Allahabad Pillar Inscription with Mahārāstra and himself places it in the Vizagapatam district.³ There is therefore no parallelism between Kālidāsa's description and the description in the Allahabad Inscription. One should note here that Kālidāsa makes Raghu

* Second and third centuries after Christ (S. K. Atiyangar Ancient India, Ch. XIV Beginnings of South Indian History Ch. IV) K. V. S. Iyer's theory of a much later date is not accepted by scholars. See B. G. Seshu Iyer in I H Q. I 473 82 643 52.

² A.H.D. p. 60.

³ Prof. D. R. Bhandarkar accepts this identification (I H Q., I, p. 244) [But G. Ramesh (ibid., p. 687) pleads for Mahārāstra.]

keep to the extreme west and avoid Central Deccan. We have a poetical significance here : Raghu should not be represented as conquering the country of his future son's would-be father-in-law, the king of Vidarbha (or his overlord, the Andhra king, if he had any). There may be also an historical reason : Kālidāsa may have wanted to avoid the conquest of the Andhra territory, because Ujjayinī was politically connected with it in his time which was certainly the case in the first century B.C.¹ Vikramāditya who, according to Jaina tradition, came from Pratiṣṭhāna and drove out the Śakas from Ujjayinī about 57 B.C. may have been also related to the Andhras.² Non-conquest of Avanti follows as a matter of course, for Raghu has been already made to take a more westerly direction. I do not therefore deduce any conclusion about date from the avoidance of Avanti, as Mr. Dhanapati Banerji has, for example, done,³ particularly because this would be intelligible in any century—Kālidāsa would certainly avoid the indignity of his own province.

We have next the conquest of the Pārasikas. As the passage is important, I shall quote all the verses : पारसीकांस्ततो जेतुं प्रतस्थे स्थलवर्मना । इन्द्रियाख्यानिव रिपूस्तत्त्वज्ञानेन संयमी ॥६०॥ यवनीमुखपद्मानां सेहे मधुमदं न सः । बालातपमित्राब्जानामकालजलदोदयः ॥६१॥ संग्रामस्तुमुलस्तस्य पाश्चात्यैरन्वसाधनैः । शार्ङ्गकृतविज्ञेयप्रतियोधे रजस्यभूत् ॥६२॥ भङ्गापवर्जितैस्तेषां शिरोभिः श्मश्रुलैर्महीम् । तस्तार सरघान्यासैः स चौद्रपटलैरिव ॥६३॥ अपनीतशिरस्त्राणाः शेषास्तं शरणं ययुः । प्रणिपातप्रतीकारः संरम्भो हि महात्मनाम् ॥६४॥ विनयन्ते स तद्योधा मधुभिर्विजयश्रमम् । आस्तीर्या-जिनरत्नासु द्राक्षावलयभूमिषु ॥६५॥ Verse 60 tells us that Raghu went by a *land* route, which shows that there was an alternative sea route. The Persians were therefore conquered in Persia and not in Gujerat or Sind, as is often

¹ C.H.I., I, pp. 531—3.

² Mr. Hariṣ Krishna Deb in the Zeitschrift für Indologie und Iranistik, Vol. I, pp. 250—302, identifies him with Gautamīputra Śātakarṇi and places the latter in the middle of the first century B.C.

³ Q.J.M.S., Vol. X, pp. 79-80.

believed.¹ This verse runs in our mind in *ākāṇśā* for learning the result of this expedition and the following verses therefore cannot tell us of a different conquest. Consequently वरुण in V 61 means a Persian lady and Mr Sankara is not justified in saying "In the *Raghuvarṇana* (IV 61), Raghu is said to have defeated the Yavanas on his way from Trakuta to the land of the Pārasikas, i.e., in the Indus delta,"² nor also any other scholar who believes that Raghu separately defeated the Yavanas and the Pārasikas. What our text warrants us is that Kālidāsa has confused the Persians with the Yavanas. This is remarkable for our poet who is so very accurate in his observations and expressions. The fact has a very important bearing on the date of Kālidāsa. Since the middle of the third century before Christ the Parthians were reigning in Persia and their rule continued till 225 A.D. Prior to them the Greeks were ruling there. When the Arsacids came to power, the Greek population was not driven out but remained in Iran. Eastern Iran which probably Kālidāsa means is the land of the Pārasikas conquered by Raghu had in the first century B.C. a strong Greek element in its population, the residuum of the previous Bactrian Greek ascendancy, some petty Yavana chiefs were also reigning in this region about this time.³ To this should be added the fact that the Parthian kings called themselves *Philhellènes* and struck coins with Greek legends, they were more Hellenistic in culture than Persian. Under such circumstances Kālidāsa could well confuse between the Yavanas and the Pārasikas in Persia (Eastern Persia?). Does not this place Kālidāsa in the Parthian period? Non mention of the Yavanas in the Gupta inscriptions, particularly in the Allahabad Pillar Inscription of Śaundraya-Gupta, distinctly

¹ I am very glad to find Mr Dhanapati Banerji (*ibid.*, p 94) emphasise this point. For maritime commerce between Barygaza (Broach) and Persia in that early period see the Periplus of the Erythraean sea.

1 H Q I p 313

² O H I, Vol I Ch XXIII

shows, if any proof is necessary, that there was no Yavana power or population to the frontier of India in the Gupta period. Professor Dr. D. R. Bhandarkar, with whom I was discussing the question in March 1924, told me that "Kālidāsa has confused between the Greeks and the Persians and that is all." He did not want me to go further than that. But I cannot help doing this as I am fully convinced of the habitual accuracy of Kālidāsa's expressions. Kālidāsa mentions the Yavanas and the Yavanas alone (and not the Pārasīkas) as encountering the Śunga army in his *Mālavikāgnimitra* and other evidences indicate that Puṣyamitra had actually a tussle with Yavanas (and not Pārasīkas). I therefore explain this single confusion of Kālidāsa¹ by the large Yavana element in the Persian (especially East-Iranian) population of the first century B.C. Verses 61 and 65 tell us of the plenty of vine in the country of the Pārasīkas and this is still true of certain parts of modern Persia and Afghanistan.² Verse 62 informs us that the Persians fought on horseback. We know from Herodotus (Bk. I. §136) of the Persian fondness for horsemanship and Bactria which may have been the place where Kālidāsa makes Raghu fight the Persians³ was noted both for horses and the vine.⁴ The mention of beards of the Persians has, strangely enough, caused some trouble to a scholar of great note, because 'the Parsees are clean-shaven and so must have been their ancestors.' But not all modern Parsees are clean-shaven⁵ and ancient Persians,

¹ My friend Professor Pramathanāth Sarkār, M.A., of the City College and the Calcutta University, a rare Kālidāsa scholar, says that Kālidāsa has not confused the two peoples at all but has simply referred to their admixture. If this interpretation is accepted, my argument about the poet's date applies with greater force.

² Keane's *Asia*, 1896, Vol. II, pp. 25, 486. I have used the term 'Persia' in a wide sense.

³ Cf. Kṣīrasvāmin in his commentary on the *Amarakośa* (ed. Oka, p. 110), वहीलीकदेशज वादीक यद्योहस्तरविजये "दुधुवर्गजिनः स्कन्धान्मग्नकुङ्कुमकेसरान्," which shows that ere this Raghu was not far off from Bactria.

⁴ Rawlinson, *Bactria*, pp. 2-3.

⁵ I have one Parsee friend in Calcutta who has a nice beard and it is well known that the Parsee Dastus (who necessarily conform to old ways) do grow most venerable beards.

as we know from their sculptures, did have a luxuriant growth of beard.

The three following verses (66—68) are again important and they are “तत्र प्रतप्ये कौवेरी भास्यानिव रघुर्दिशम्
शररग्रे किन्नेदीच्यानुद्गरिष्यन् रसागिव ॥६६॥ विनीताध्वभ्रमास्तस्य वधू (१ l.
सिन्धु) -तारविचष्टनं । दुपुवुवाग्नि स्तन्धात् लम्कुल्लुमन्नेसरान् ॥६७॥ तत्र
दृष्यास्रोधाना भर्तुषु प्लवविग्रमम् । कपोलपाटलादग्नि बभूव रघुवष्टितम् ॥६८॥”
From Persia Raghu turns northwards (V 66) and the Oxus
(वधू) falls on his way along whose banks his horses wander
long (V 67) वधू is the reading according to Nandargikar,
of Vallabha, a commentator earlier than Hemādri, Cāntravardhana,
Mallinātha and Sumatavijaya, who all refer to him¹ and वधू of Cāntravardhana and वधू of Sumatavijaya,
the other readings are मधू and सिन्धु² From this we may safely
infer that वधू was the original reading and understand
the Oxus to have been meant by Kālidāsa. Mallinātha changed
वधू to ‘सिन्धु’ because the name was unknown for any
Indian river—these commentators could not realize that
Raghu was now outside India! Cāntravardhana throws out the
wild guess that वधू was a lake in Kashmir—“वधू नाम
कारसीति ह” Why? Because saffron mentioned in the last
line of the verse grows in Kashmir (“कारसीरस्ये कुकुमश्चेत्वाहुस्वाचम
विचष्टनं शोभनं गम्भीरमस्तस्य दुःखम्” — Cāntravardhana)
And Mallinātha removes all difficulties by boldly reading
‘सिन्धु’ for ‘वधू पश्य’ ‘वधू’ or ‘मधू’, the Indus certainly
flows through Kashmir. Apart from the extant readings of
the earlier commentators, there is a very strong objection
against the reading ‘सिन्धु’ (=the Indus)—स्वटवर्मना in
Verse 69 has already indicated that Raghu is no more on
Indian soil. As regards saffron, on which Raghu’s horses
rolled, the flower does grow in Persia,³ though the fact is
not generally known. Raghu was now in the north-eastern

¹ Nandargikar & Raghuvarma, *Ibid.* ed. Introduction p. 11

² *Ibid.* Text p. 115 critical version V. 67

³ See *Index* at the end of the commentary in *Ibid.*, Notes p. 81-2

⁴ See *Encyclopaedia Britannica* 11th ed., Vol. 23 p. 299

frontier of Persia. Though Kālidāsa does not expressly tell us that Raghu crossed the Oxus, we may confidently believe that is what the poet meant. In Ra., V. 42, we are told that Aja reaches the banks of the Narmadā and its crossing is not anywhere referred to ; but the prince must have crossed the river before he could reach Vidarbha territory. Ra., IV. 68, describes in one short verse Raghu's conquest of the Hūnas. The mention of the Huns is commonly believed¹ to preclude the possibility of a date earlier than the fifth or sixth century A.D. But Indian knowledge of the Huns in the first century B.C. is not impossible. The Huns are mentioned as Hunus in the Yashts (V. 53, 57, X. 113, XIII. 100 and XIX. 86, also XIX. 41?) of the Avesta² which can hardly date from a post-Christian era. The erection of the great Chinese Wall led to certain important race migrations in the second century B.C. The Hiung-nu (=Huns), against whom the wall was intended, fell upon the Yueh-chi, a people belonging to the same stock, in 165 B.C. and displaced them from Kan-suh in North-Western China. The Yueh-chi, in their turn, routed the Wu-sun in the country of the Ili river and continued their journey westwards. One section of these people, the Great Yueh-chi, settled on the north of the Jaxartes after driving the Śakas from there. But they could not long remain in peace in this country. The infant son of the Wu-sun chief whom the Yueh-chi had killed had now grown up to manhood under the protection of the Hiung-nus, the old rivals of the Yueh-chi and he now (c. 140 B.C.) with their help attacked the Great Yueh-chi and drove them to the south of the Oxus.³ The Hiung-nus could have now lived (in

¹ Huth, *Die Zeit des Kālidāsa*, pp. 23-32 ; Hillebrandt, *Kālidāsa*, p. 13, and K. G. Sankara Iyer, summarising Indian and English opinions, in *Q.J.M.S.*, Vol. IX, pp. 46, 49-51.

² J. J. Modi, in *Bhandarkar Commemoration Volume*, pp. 65-80.

³ See among other summaries, M. A. Stein, *I.A.*, Vol. 34, pp. 75-6, C. H. I., Vol. I, pp. 565-6, and Smith, *E.H.I.*, pp. 263-5 ; also see Stein in the *Geographical Journal*, May 1925, pp. 397 ff., for fuller particulars on some points.

small detachments?) to the north of the Oxus or may have frequently made incursions there. Since 115 B.C. the Kansu region had been free of the Hung-nu and they were now confined to the Tien-shan whence they could pounce on only the people to the south-west the two Chinese walls made depredation on Chinese territory now impossible, and the Oxus region was in a direct line for the frequent attacks of those marauding horsemen. Tales of Hung-nu depredations would be easily carried to Persia c. 100 B.C. or earlier and also to India about that time through traders.¹ Could not Kālidāsa know of the Hūnas in the middle of the first century B.C. from the (Persian) Śakas of Ujjayini or from traders? The poet does not precisely tell us if the Hūnas lived to the immediate north of the Oxus or were some way off. We should also remember that the Yuch-chu who were living to the north of the Oxus about 110 B.C. seem to have been akin in race to the Hung-nu.² It should be noted that Kālidāsa has left some interesting local touches for all the other principalities or peoples conquered by Raghu, but for the Hūnas he could only say that Raghu caused their women to slap their own cheeks at the loss of their lords.³

¹ A brisk trade between China and western countries including Persia and India began in the reign of the great Han Emperor Wati (140-87 B.C.) and silk was the chief thing exported from China. We find Kālidāsa refer to this new ware as *Cīnamsuta* (Chinese cloth) in *Sikuntalā*, Act I last verse and Ku VII 1. We have here a delightful bit of anachronism like the reference to the importation of spices in Ra VI 57. For Chinese trade with India about this time see *Periplus of the Erythraean Sea* (Schoff) §64. After this region under the very north the sea outside ending in a land called Thina, there is a very great inland city called Thinae from which raw silk and silk yarn and silk cloth are brought on foot through Bactria to Barygaza, and are also exported to Damirica by way of the river Ganges." Of course silk had begun to be imported into India much earlier (Schoff, p. 264).

² See Smith, E.H.I. p. 262 and n. 1 and V. Annel Stein's paper "White Huns and Kindred Tribes in the History of the Indian North West Frontier" in L.A. Vol. 34 pp. 73-87 referred to above.

³ Professor Bhandarkar in the course of the conversation referred to above said there might be a local touch in the slapping of the cheeks it is generally the head or the breast that an Indian

This shows conclusively that Kālidāsa knew not much of the Hūnas or their country and what little he knew was from mere hearsay. I cannot therefore believe that mention of the Hūnas in Ra., IV. 68, necessarily makes Kālidāsa live after 420 A.D. or later still and I am very glad to find Professor Keith remark, "The exact identity of the Hūnas of the epic is immaterial; as the name had penetrated to the western world by the second century A.D. if not earlier, there is no conceivable reason for assuming that it could not have reached India long before the fifth or sixth centuries A.D." ¹ That a well-travelled and well-informed man like Kālidāsa could not secure any precise information about the Hūnas certainly suggests that they were not living in the neighbourhood of India in his time. The discovery of the earlier reading 'वंक्षू' or 'वंक्ष' or 'वंक्' for Mallinātha's 'सिन्धु' has dispelled the old illusion that Kālidāsa places the Huns in Kashmir and the information about the growth of saffron in Persia supplied by the Encyclopædia Britannica removes all doubts.

The other peoples conquered by Raghu are unimportant for our purpose. But before taking leave of Canto IV, I must make some remarks about the alleged Gupta basis of Kālidāsa's *digvijaya* story. Mark Collins believes in this origin and he has drawn up a comparative table of the countries conquered by Raghu and those conquered by Samudra-Gupta (including some with which S. had but diplomatic relations).² But no great pains are required to

woman strikes in grief. My brother-in-law Mr. Santosh Kumar Banerji, a Persian scholar, tells me that slapping the cheek is a Persian custom, and my friend Mr. M. Naimur Rehman of our Persian and Arabic Department corroborates Mr. Banerji's statement from personal observation. The custom also seems to have been known in some part of Arabia. But no such information is available about the Huns. [Does K. ascribe to the Huns a Persian custom?]

¹ Sanskrit Drama, p. 145. I may here refer to the mention of Hūna-lipi in the Lalitavistara (ed. Lefmann, p. 126), which even in its present form can hardly be as late as the fifth century A.D.

² Geographical Data of the Raghuvamśa and Daśakumāracarita, Leipzig, 1907, pp. 57—9.

realise the want of real parallelism. Collins has noticed one difficulty, that the geographical terms used by Kālidāsa are different from and earlier than those used in the inscriptions of the fifth and sixth centuries A.D. He has sought to explain this discrepancy by assuming that Kālidāsa used conventional geography! This is but natural because he started with the given premise that Kālidāsa lived sometime "between 400 and 600 A.D." We have now sufficient reason for placing our poet much anterior to 400 A.D., and we need not therefore brand his geographical terms as conventional. That he has been purposely¹ a little vague here and there I do not want to deny, but he has been mostly true to the conditions of the first century B.C. Mr. Radhagovinda Basak attempted a more thorough parallelism between Raghu's *digvijaya* and Gupta conquests² and it seems at first sight that he has completely succeeded. But careful scrutiny will reveal that he has exaggerated the resemblances and has sometimes interpreted the inscriptional evidence in the light of Kālidāsa.³ It should be noted that there is nothing in the fourth canto of the *Raghuvamśa* corresponding to Samudra-Gupta's receipt of tribute from some Punjab tribes, or his violent uprooting of the neighbouring chiefs in Āryāvarta. A. Gawronski's explanation of the latter discrepancy⁴ must be considered a poor

¹ We should remember that the supposed date of his story is earlier than his times by at least several centuries.

² In a paper communicated to the Second Oriental Conference at Calcutta. See Proceedings pp. 525-534.

³ Compare for example his supposition that Candragupta I re-established the family of the reigning princes of Bengal after having conquered them because Kālidāsa makes Raghu re-establish the King of Vanga after defeating him though the Meherauli Inscription tells no such tale. The inscription mentions only the defeating of the Vāṅgas by Candragupta and it is not certain that this Candragupta is Candragupta I. He was probably the same person as Candragupta Varmān of Prākaraṇa (in Rājputana) who was a contemporary of Candragupta I. See IA 1913 pp. 217-9 Smith, E.H.I. p. 307 n. and R. D. Banerji's *বঙ্গবিহার ইতিহাস*, ১ম ভাগ, পৃ. ৪, ৪১, ৪৪.

⁴ "The *Digvijaya* of Raghu and some connected Problems" in *Rocznik Orientalistyczny* Vol. I Krakow, 1914 5, p. 46.

attempt. Nor does Samudra-Gupta *march against* the king of Kāmarūpa as Raghu does. I cannot therefore help believing that Kālidāsa has followed no actual historical model but his own imagination, and such epic model as may have existed before his time in describing the conquests of Raghu.¹ I may even say that Hariṣeṇa, the chronicler of Samudra-Gupta's conquests, derived some hints from Kālidāsa's poem and made much of his patron's petty conquests and described his defeats or indecisive engagements as *grahaṇa-mokṣānugraha-janita-pratāponmiśra-mahābhāgya*.² What induced Kālidāsa to make Raghu release the kings of Vaṅga and Kalinga after conquering them was probably the presence of these kingdoms in his time. And there was the additional driving factor in our poet's *ahimsā* predilections;³ see Ku., III. 20, Ra., V. 50, Ra., V. 57 (with VII. 61-62) and VII. 47—also IX. 14, XVI. 2, XVII. 42, which speak of similar restitutions of territories. *Before we utilise a poem for historical purposes we should determine fully the poet's view of life.* It is usual to believe that Samudra-Gupta was a mighty

¹ Compare Keith in J.R.A.S., 1909, p. 437: "But, in truth, as Buhler pointed out, the poem shows in every line that Raghu's march is a poetical one, not a real one. Just as Somadeva copies Kālidāsa in an account presumably meant to be at least as historical as that of Raghu's conquests, so Kālidāsa followed the Epics, the Purāṇas, and other Kāvya writers. He makes Raghu conquer Pārasikas, Hūpas, Kāmbojas, Yavanas, *et hoc genus omne*; he simply defeats for him all warlike nations,....." I am in complete agreement with Professor Keith, except in so far as the Pārasikas are concerned, for which see below.

² We read at school a certain text-book on Indian History, describing the battle of Chillianwalla as a drawn engagement and another as a victory for British arms! A. Gawronski has himself (*loc. cit.*, pp. 48—55) shown the influence of Kālidāsa on Somadeva (in his description of Udayana's conquests). Another possible influence of Kālidāsa may be traced in the Mahāprajñāpāramitā Śāstra, ascribed to Nāgārjuna and translated into Chinese before 405 A.D., in which a Bodhisattva is described as having "proceeded for a short time to Northern India to the country of the Yuetche to subjugate the Dragon King Apalala, and finally" as having gone "to the west of the Yuetche to conquer the Rakshasi"! (Nariman, Sanskrit Buddhism, 1st ed., p. 194).

³ Probably under Jaina influence.

conqueror. But M. Jouveau-Dubreuil has shown that the belief is a little exaggerated, at least so far as the South is concerned.¹ I have a lurking suspicion in my mind that Samudra-Gupta's imagination was fired by the poet Kālidāsa's description of Raghu's *digvijaya* and he may have tried to imitate it, as far as it was then possible.² Raghu conquered the eastern and south-eastern powers and then turned southwards. Samudra-Gupta himself belonged to the eastern province of Magadha and he therefore first³ turned southwards. But meeting with a repulse there, after some success, he could not complete the circuit of South India,⁴ but retraced his steps conquering some more petty principalities. The easier conquests in North India have been made much of by his panegyrist and the diplomatic relations with some foreign powers, though true, may have been entered into by Samudra-Gupta or described by Harisena in imitation of Raghu's conquest of the Persians, the Huns and the Kambojas. Kālidāsa could not flatter the Gupta

¹ A.H.D. pp 53-61

² Samudra Gupta seems to have had a predecessor in Candrarman of Puskarana, who claims to have conquered even Vāhlika (Bahlik) where Kālidāsa made Raghu go.

³ The Allahabad Pillar Inscription describes the southern conquests first and M. Jouveau-Dubreuil seems justified (A.H.D. p 59) in rejecting Vincent A. Smith's theory (E.H.I. p 299) that Samudra Gupta first "subjugated the Rājās of the Gangetic plain."

⁴ G. Jouveau-Dubreuil (A.H.D. pp 59-60) shows that Devārāstra is not Mahārāstra, nor is Eranḍapalla in Khandesh. Professor Lhandarkar (I.H.Q. I p 253-254) seems to accept Monsieur Jouveau-Dubreuil's identifications. It would be proper for me to mention here Professor Dr Radhakumud Mukherji's objection against the French scholar's rejection of Mahārāstra and Eranḍol. He told me that it would be difficult for Samudra Gupta to return by the way he had first marched for his conquered enemies would try to harm him and he would therefore take a more westerly direction. But the argument does not convince me and it is possible to infer from the text of the inscription that Samudra-Gupta did slightly alter his path, but still confining himself to the east coast. In support of an eastern locality for Devārāstra, I may quote a verse occurring in the Vāyu and Brahmāṇḍa Purāṇas, giving the territorial limits of the Devarakṣitas (of the fourth century A.D.) *आवर्तयन्त्यस्योत्तरदिशं ताम्रिकां वराहपुं, यन्ता देव दृष्टे एव। ओदयन्ते देवदत्तः ।* (Pargiter D.K.A. p 54)

monarchs by making Raghu conquer lands which even Samudra-Gupta could not reach. Why do Gupta period theorists forget this? The first portion of the Allahabad Inscription of Samudra-Gupta, describing Candragupta's acceptance of this prince as heir-apparent and ensuing events, has a strong resemblance with the concluding portion of Raghuvamśa, Canto III, and the first few verses of Canto IV, where we have a similar description of Dilīpa's passing on of the crown to Raghu and the immediate effect of Raghu's accession. One would naturally think that Kālidāsa was influenced by the actual facts of Samudra-Gupta's accession, but is it certain that Hariṣeṇa did not use the court poet's usual hyperbole? I shall show the resemblances elsewhere but I may mention one parallel here: "दिलीपानन्तरं राज्ये तं निशम्य प्रतिष्ठितम् । पूर्वं प्रभूमितो राज्ञां हृदयेऽग्निरिवोद्गताः ॥" (Ra., IV. 2) possibly suggested "वीर्योत्तसाश्च केचिच्छरणमुपगता यस्य वृत्ते प्रणामे ॥"¹ of the inscription (l. 10.); compare also v. 4 (ll. 7-8) of the inscription with Ra., III. 68. And "साध्वसाध्वदयप्रलयहेतुपुरुषस्याचिन्त्यस्य" of the inscription (l. 25.) may preserve a distant reminiscence of "अमुं युगान्तोचितयोगनिद्रः संहत्य लोकान् पुरुषोऽधिरोते" (Ra., XIII. 6) and of the verse preceding it ("तां तामवस्थां प्रतिपद्यमानं स्थितं दश व्याप्य दिशो महिम्ना । विष्णोरिवास्या-नवधारणीयमीदृक्तया रूपमियत्तया वा ॥").

But some historical facts may be after all behind Kālidāsa's story. I have already drawn attention to the fact that the king of Kalinga has been likened to adverse fortune in Ra., VI. 58, where Indumatī rejects him. This may have been due, as I have suggested, to the historical depredations of king Khāravela of Kalinga of the preceding century over the territory, among others, of the Bhojakas of Vidarbha. Kālidāsa has dilated over only three conquests, those of Kalinga, Persia and Kāmarūpa. The king of Kāmarūpa did not fight at all but the Kalingans and the Persians did put up a tough fight. Kālidāsa has described these two fightings with some *animus*. The reason for his pique against the Kalingans has been already

¹ Does 'यस्य वृत्ते प्रणामे' mean 'whose coronation salute being done'?

indicated and that for the Persians I shall suggest now. The Jaina legend in connexion with Kālakācīrya's history represents him as going out of India and bringing the Śakas from the other side of the Indus to dethrone and kill Gardabhilla of Ujjayinī. The chiefs of these foreigners are termed Śāhis and their overlord Śāhānu Śāhi.¹ The titles are Persian and we know that the Śakas in and to the north-west of India in the first century B C were under the Parthians or were related to them.² Kālidāsa's fair Ujjayinī remained under foreign rule till (Gardabhilla's son) Vikramāditya, so the tradition continues, came from Pratiśthina (Paithān) and drove out these Saka-Pārthava usurpers. Our poet could not therefore cherish kindly feelings towards these Sakas or their suzerains, the Pārthians, and he made Raghu beard the Persian lion in his den. The foreign conquerors of Ujjayinī were Sakas and not Persians proper but they were vassals of the Persians and bore Persian titles and certainly followed Persian ways. We may therefore believe that Kālidāsa made Raghu conquer the overlords of these Śakas, the Persians, in their own home to wipe off, if he could, this national disgrace. The Kumārasambhava may have been written when the "demoniacal" foreigners were reigning in the heart of the sacred land of Avanti³ and the prince Vikramāditya⁴ may have been living in the court

¹ See *J D M G* Vol 34 pp 262-3. Professor Sten Konow makes out the Indo-Scythian conquerors of India to be Iranian in stock and speech. See *Modern Review*, April 1921 pp 463-470.

² See Smith *E H I* pp 242 ff. Rapson *CH I*, I Ch 23.

³ Cf. 'नदिनं विहता कलि तारकं विभीषणः । दुरासहं दुराकायं चान्धोदयं वदुः ।' (II 1) etc. of the *Kumārasambhava*. Students of Bengali Literature will here recall the case of the वृत्रनाशक (Vṛtra Samahāra) of Babu Hemchandra Bandyopadhyaya.

⁴ I am not certain whether विजयनगर was the name of the individual or the title assumed on accession but the latter assumption would probably be more natural. Candragupta II, who reconquered Malwa from the Sakas about the end of the fourth century A D, was probably the second man to assume the title of Vikramāditya in imitation, as it seems of the avenger of Gardabhilla. Similar attempts at imitation by King Bhoja of Dhārā of early eleventh century are known to scholars. Modern traditions about Vikramāditya

of Pratiṣṭhāna, planning the rescue of his ancestral kingdom from the yoke of the foreigners.¹ The Raghuvamṣa was certainly a later work, possibly the last of Kālidāsa's writings. There was peace and prosperity now, and the poet takes an imaginary vengeance on the late disturbers of the peace.² I shall show below that Kālidāsa makes a veiled reference to Vikramāditya, king of Ujjayinī in the Raghuvamṣa.

We may now turn to the sixth canto of the Raghuvamṣa, where the qualities of some of the important kings of India are recounted before Indumatī and our poet incidentally gives us some idea of the political condition of India in his time (or shortly before). We are justified in making some inferences about contemporary conditions by the fact that there is little correspondence between Kālidāsa's political divisions and those in the Rāmāyaṇa and the earlier Purāṇas; Kālidāsa was therefore influenced more by the actuals of his day than

seem to contain elements from incidents in the reigns of these three kings. The Vikramāditya referred to by Hāla (V. 64) must necessarily be Gardabhilla's son. The greater part of Kālidāsa's literary career probably belonged to a period prior to Vikramāditya's patronage.

¹ I have given one possible explanation for the non-completion of the work; another may be that fear of the reigning Śaka chief made Kālidāsa leave his poem unfinished. I must mention here a view long held by my friend Professor Pramathanath Sarkar that the Kumārasambhava is not an incomplete poem but that its story has a natural and artistic end with the eighth canto. But I do not accept my friend's view as the Kumāra is not even conceived at the end of that canto.

² The Śaka invaders may have been known, when they first came, as Persians, and their true nationality may have been realised only later. We have a somewhat similar case in the term 'फिरींगी' (Phiriṅgī=Frank) used long in my province promiscuously for all Europeans. *The writer of the Periplus of the Erythrean Sea* (§38), knew the Śakas of Sind as Parthians. Kālidāsa's information about Persia may have been obtained not from travel in that land but only from the testimony of the Śaka intruders in Ujjayinī. *The information about the Hūṇas may well have been received from this source,*

by the earlier writers. But it is possible that in some cases there is no correspondence between Sumatī's description and the real condition of the state in Kālidāsa's time.

The king of Magadha heads the list. He is described in Verses 21—24 and Verse 25 refers to his rejection by Indumati. The verses may be quoted here

“असौ शरद्व शरणोन्मुखात्तामगाधसत्त्वो मगाधप्रतिष्ठ ।
 राजा प्रजारजनलम्बधर्ष्य परन्तपो नाम यथार्धनामा ॥२१॥
 काम नृपा सन्तु सहस्रशोऽप्ये राजन्वतीमाहुरनन भूमिम् ।
 नदस्तापमइसकुंटापि ज्योतिष्मती यद्रससैव तत्रि ॥२२॥
 क्रियाप्रबन्धादपमधरायामनसमाहुतसहस्रनम्र ।
 शय्याधिर पाण्डुकपोललम्बान् मन्दारगुह्यानलकाधकार ॥२३॥
 धनन चदिच्छसि गृहमाय पाणि वरेष्वेन कुद प्रवेगे ।
 प्रासादावातायनसंश्रितानो नत्रोत्पन्न पुष्पपुराङ्गनानाम् ॥२४॥
 पृथ तपोष्णे तमवेभ्य किञ्चिदिच्छसिदूर्वाङ्गुमपूजमाटा ।
 ऋदुप्रशामक्रियैव तन्वी प्रतादिदेयेनममापमाया ॥२५॥”

Verse 22 distinctly shows that Magadha was the chief power in India in Kālidāsa's time. The Gupta period theorists read here a reference to the Imperial Guptas of Magadha. But, was an inglorious dynasty ruling in Magadha in the first century B C? The Mauryas were the paramount rulers of North India and though the Magadhan Empire had considerably diminished during the reign of the successors of Aśoka, Pūṣyamitra, the founder of the Śunga dynasty, did make some extension of territory, and though by the time of the Kānvas, who were reigning in the second and third quarters of the first century B C, disintegration had again set in, the imperial glory had not altogether left the throne of Pūṣpapura (Pāṭaliputra). The Kānvas may well be compared to the later Mughal Bādshāhs of India, who though Emperors in little more than name, did receive the honour of paramount rulers. The glory of the Magadhan throne extended in the past through the Śungas, the Mauryas, the Nandas and the Śīśunāgas to the Purāṇic Bṛhadrathas. There is therefore nothing in verse 22 making for a late date.

The following verse refers to the performance of many sacrifices by the King of Magadha. Here too the Gupta period theorists see a reference to the performance of the *Aśvamedha* sacrifice by Samudra-Gupta after it was long in disuse ("चिरो-
स्त्राश्वमेधाहृतः"). But did not Puṣyamitra too revive the *Aśvamedha* ceremony of which we have an allusion in Patañjali's *Mahābhāṣya*, a circumstantial account in Kālidāsa's own *Mālavikāgnimitra* and a reference in the newly discovered Śuṅga Inscription?¹ That Kālidāsa had a great regard for the Śuṅgas is conclusively proved by his selecting the theme of his virgin drama from their history. And these Śuṅgas were not far removed in time from a writer writing in ± 50 B.C. Indumatī bows to the King of Magadha before she passes on to another king; no other king received the same treatment. This is, so says Mr. Bijay Chandra Majumdar, because the Guptas were the Emperors of North India in the fifth century A.D. But imperial title (with a nominal empire, if you like) is intelligible in the King of Magadha of pre-Christian centuries as well. The real reason for Indumatī's *praṇāma*, however, seems to me to lie in the fact that a Brahmin dynasty was just then sitting on the throne of Magadha. The Kāṇvas (72 B.C.—28 B.C.) were certainly Brahmins and such may have been their predecessors, the Śuṅgas, too;² a Ksatriya princess would naturally bow down before a Brahmin prince.³ This interpretation is probably supported by the

¹ Mr. K. P. Jayaswal in *Modern Review* for October, 1924 (pp. 430-2) The inscription (found in Ayodhyā) gives the interesting information that Puṣyamitra performed the *Aśvamedha* sacrifice twice—"द्विस्त्रिंशद्वयजिनः सुनापतेः पुण्यनित्तस्य" (*ibid.*, p. 431).

² See K. P. Jayaswal, *J.B.O.R.S.*, Vol. IV, pp. 257-260. MM. Pt. H. P. Shastri first offered this suggestion. The arguments of Pt. Shastri and Mr. Jayaswal convince me.

³ I do not blind myself to the artistic effect of making Indumatī pause a while before the first king she is introduced to and courteously bowing to him before rejection; she soon gets over her delicacy and rejects suitor after suitor till she comes to Aja. I do not want to forget that Kālidāsa was writing poetry and not history and I regret the lot of us twentieth century readers

expression—*labdha-arna* in v. 21, where a secondary meaning of “*द्वयो वयं उत्तमवयं*” (a Brahmin’s caste or, say, a twice-born’s caste) *येन*” may have been also intended. The Kāṁvis were Brahmins and if the Sungas too were not so they were at least of a higher caste than the doubly fallen (casteless and heretical) Mauryas. Kidāsa may have been thinking of Pusyamitra when he wrote “*महारजनलब्धवयं*” and “*परन्तपो नाम ययार्थनामा*” for the founder of the Sunga dynasty inaugurated a Brahmanical revival and gained popularity with the Hindu subjects who had so long been cast into the shade, and he certainly crested swords with the Yavana invader Menander and defeated him.¹ It is also possible that our poet was thinking of Vasudeva, the founder of the Kāṁva dynasty, who could well earn popularity with the subjects through the removal of the licentious Sunga king Devabhūti (—bhumi). No special significance can however, be shown for *parantapak* in this case.² Before taking leave of the king of Magadha, I must, in all honesty, mention one point which might go against my theory. Verse 21 makes this king “the refuge of persons seeking shelter” and we should probably read here an allusion to some well known incident in the life of the contemporary king of Magadha or of any previous king

who have to read history in the finest poem. Still an indirect hint at the caste of the contemporary king of Magadha does not seem to me incompatible with the artistic reason for this preferential treatment. [I may mention here a highly humorous explanation of this *pranama* proposed by Mr Nityalal Mookerji, late Principal of the Carmichael College Rangpur. When I gave him one day my explanation of the obscurity he said with a smile—*এটা বুঝতে পারলেন না? ইন্দুমতীর মনে হল ঠাকুরদা চূড়িঃ ?* (Don’t you understand the reason? Indumati thought Grandpa, thou too (art come)!)]

¹ Even if the whole fighting was done by his grandson Prince Vasumitra the credit goes to him.

² Vasudeva = Kṛpa was, however famous as a killer of many foes human and non human.

(historical or Purāṇic).¹ From my present knowledge I cannot make out what incident in the first or any previous century before Christ our poet could have referred to. But there is a line in Hariṣeṇa's panegyric of Samudra-Gupta which does speak of that monarch's vouchsafing of help to other kings—"अनेकअष्टराज्योत्सन्नराजवंशप्रतिष्ठापनोद्भूतनिखिलभुवनविचरण-शान्तयशसः (l. 23)."² This ought to make Kālidāsa posterior to Samudra-Gupta, but, as I have sufficient ground for believing that Aśvaghoṣa has borrowed from Kālidāsa and not Kālidāsa from him, I prefer to take Hariṣeṇa's statement as a hyperbole in the usual courtier's style and possibly under the influence of Kālidāsa. Later research may some day reveal to us some story of Puṣyamitra's helping of other (Brahmanical) states in throwing off foreign (or Buddhist) yoke.³ Can we read here any reference to Udayana's regaining of his ancestral land (encroached upon by the Kāśis)

¹ Possibly not Pūrāṇic, because 'इषा इषोष्यविन' परेष्वो षर्गेतिरं नख्यमनाग्रवन्ते' of Ra., XIII. 6, seems to indicate that such an incident was in the living memory of people. If Puṣyamitra is meant by Kālidāsa in Ra., VI, 21, he could certainly be described as 'षर्गेतिर नख्यम्' in XIII. 6. [But was K. thinking of the refuge and help Vikramāditya received from the Andhra court? If performance of sacrifices could entitle Puṣyamitra to the epithet *dharmottara*, some Andhra chiefs (notably, the third, Śrī-Śātakarṇi) could lay claim to it (see Rapson, C. H. I., I. pp. 530-1). The son of Gardabhilla overthrown and killed by the foreign Śakas could certainly be alluded to as *upaplavin nṛpa*.]

² Cf. also "कृपयदीनानायातुरजनीहृत्पुत्रवसन्तदीक्षाद् पुगतमनसः" in l. 26

³ After I had written the above I referred the question to my friend Professor Pramathanath Sarkar. He said Kālidāsa was probably alluding to Puṣyamitra who must have helped many princes suffering from the attacks of Menander by defeating him or to Candragupta Maurya who certainly formed a league with many chiefs and helped them to throw off the Greek yoke. My friend was emphatic in his view that most of the kings thought of by Kālidāsa belonged to the immediate past and were not his contemporaries.

through the help of Darsaka, king of Magadha, with whose sister Padmāvatī he contracted a political marriage?¹

After the king of Magadha is courteously rejected by Indumatī, Śunandā carries her to the king of Anga. A king of Anga is certainly unintelligible as a power distinct from the Gupta king of Magadha in the fourth or fifth century A.D., and neither Anga nor Campā come in for mention in any of the Gupta Inscriptions. Anga must have been included within the home province of the Gupta emperor. We must therefore assume that Kālidāsa's Anga nātha belongs to the realm of legends. But if there was no distinct state of Anga in Kālidāsa's time, why did he introduce a king of Anga in the sixth canto of the *Raghuvansha*? I have already drawn attention to the purposive character of Kālidāsa's selection. There are some indications about the presence of a state of Anga, distinct from that of Magadha, in the second century B.C., and the same condition may be safely inferred for the following century. Khāravela lays claim to having carried away the wealth of Magadha and Anga,² *Magadha and Anga were therefore distinct kingdoms in his time*. The king of Rājagṛha (l. 8) also may have been distinguished from Bṛhaspatimitra (= Puṣyamitra, according to Mr Jayaswal) of Magadha (l. 12), though Mr Jayaswal has identified the two.³ The mention of

¹ The story is given in the *Śvapnavāsanadatta* and in the *Kālidāsaśaṅkara* (possibly on the basis of the *Bṛhatkathā* of Guṇāḍhya for the brief *Bṛhatkathāślokaśaṅkara* of Buddhasvāmin makes a reference to Padmāvatī.) See Harit Krishna Deb's paper *Udayana Vatsa Rāja*, Calcutta, 1919.

² "*Anga-Magadha-rasam aneyātī*"—Hāthigumphā Inscription l. 12 J.B.O.R.S. vol. IV p. 381.

³ See C.H.I., I pp. 527-537. Mr Jayaswal has certainly made out a strong case for the identity of the king of Rājagṛha with Bṛhaspatimitra, the king of Magadha. Mathurā and the adjoining regions were certainly within the sphere of influence of the house of Vatsa (the Śūngas) at this time as numismatic evidence seems to indicate (*Ibid.*, pp. 525-6). But the language of the Hāthigumphā Inscription

a distinct king of Aṅga in Raghu, Canto VI, should therefore place Kālidāsa close to Khāravēla's time. One verse of the Aṅga group (v. 79) gives us an interesting bit of information :
 “निसर्गैर्निर्नास्पदमेकसंस्थमस्मिन् द्वयं श्रीश्च सरस्वती च । कान्त्या गिरा सूनृतया च
 योग्या त्वमेव कल्याणि तयोस्तृतीया ॥ ” We may infer from this that the king of Aṅga was a great patron of learning in Kālidāsa's day—the poet may, for all that we know, have himself received his patronage. Will scholars search for a king of Aṅga answering this description in the first or second century B.C., or in the legendary period—or say in the fifth or sixth century A.D.? Scholars who make Kālidāsa recipient of Gupta patronage should notice that *the poet has made the king of Aṅga a scholar and patron of learning and not the king of*

seems to cast some doubt over the point. Bahasatimitra's identification with Puṣyamitra is possible but not certain. But Bahasatimitra of the Pabhosā Inscription (Luder's 904) and of coins cannot certainly be Puṣyamitra. For how could Āṣāḍhasena, maternal uncle of Bahasatimitra, have lived till the tenth year of the reign of Odraka, the fifth Śuṅga king, if Bahasatimitra were Puṣyamitra, the first Śuṅga monarch? However, as this Bahasatimitra had relations in Mathurā, he could be identified with Bahasatimitra=king of Magadha (and Rājagṛha) of the Hāthigumphā Inscription, if we could bring down Khāravēla to the time of Odraka and give up all thoughts of his contemporaneity with Puṣyamitra. Mr. Jayaswal has himself recently spoken of the uncertainty of palæographic evidence (Modern Review, October, 1924, p. 432). The Śātakarṇi referred to by Khāravēla (l. 4) may well be Śātakarṇi II, the sixth Andhra king, and not Śrī-Śātakarṇi, the third monarch (as Mr. Jayaswal supposes, J.B.O.R.S., III., pp. 441-2). This supposition will probably remove all difficulties. The king of Magadha and the king of Rājagṛha of the Hāthigumphā Inscription will then easily mean the same person. The inscription may really have been incised in the 165th year since Aśoka's accession; for Aśoka was the “Muriya King” who conquered Kaliṅga and Candragupta had nothing to do with it. Of course I do not get any support for my theory from the interpretation of the inscription I myself propose but separate mention of Aṅga and Magadha in l. 12 is sufficient for my purpose.

Magadha Kālidāsa's partiality for the king of Anga is also borne out by the next verse, "अथाङ्गराजद्वयार्थं चक्षुषांहीति जन्यामवदत् कुमारी । नास्ती न काल्यो न च येन सम्भयन् द्रष्टु न मा, भिन्नसंचिह्निं लोक ।" ॥

Next comes the king of Avanti. The verses being very important from my point of view I quote them in full —

“तत पर दुःप्रसह द्विपद्भिर् (१ । परेषां) नृप निपुष्पा प्रतिहारभूमौ ।
निदर्शयामास विशेषदृश्यम् (१ । विशेषकान्तम्) इन्दु नवास्थानमिन्दुमस्य ॥३१॥

अवन्तिनाथोऽयमुदप्रवाहविंशत्यपान्तनुत्तमभ्य ।
धारोप्य चक्रप्रममुष्णवेजास्वह्वेय यदोष्ठिनिवितो विभाति ॥३२॥
यस्य प्रपाणेषु यममरुक्षेत्रेतरैर्वाग्निभिरुपितानि ।
कुर्वन्ति क्षामन्तक्षिप्तमयीनां प्रभाप्ररोहान्मम रजसि ॥३३॥
अमी महाकालनिकेतनस्य वसन्नदरे किल चन्द्रमौले ।
तमिच्छरघोऽपि सहप्रियाभिर्न्यास्तनावतो निविंशति प्रदोषान् ॥३४॥
अनेन यूता सह पार्थिवेन रम्भेह कश्चिन्मनसा हविस्ते ।
सिमातरङ्गानिलकम्पितासु विहङ्गुमुष्मानपरम्परासु ॥३५॥
तस्मिन्नभिद्योस्वितर पुष्पे प्रतापसंश्लेषितशङ्करके ।
ययच्च सा नेतमसीकुमार्यं कुमुदती भानुमतीव भावम् ॥३६॥

These verses plainly show that there was then sitting on the throne of Avanti a king (and no provincial governor) independent of Magadha or any other control. Prior to the conquest of Malwa by Candragupta II this region was under the rule of the Śakas (Western Satraps)¹ and it is highly doubtful if the sympathy of Kālidāsa would go out for these foreign usurpers. And after the Gupta conquest, Malwa was

¹ Will a Pandit Manmathanath Phattacharya appear in Bihar and claim that Kālidāsa was a native of Bhagalpur District? My late lamented teacher Pandit Sarat Chandra Śāstri used to say that of all the provinces of India Bihar has the best claim to call itself the home of the immortal poet of India. His view so far as is known to me was based only on the nature of the local tradition and not on Ra, VI 29. Kālidāsa was in all probability both a native and a resident of Avanti. He may have received only some help from Anga and even that is by no means certain.

included in the Gupta empire and a ruler meriting Kālidāsa's description could hardly be a provincial governor or even a *yuva-rāja* holding the province for the crown. Several scholars like to make Candragupta II the Vikramāditya who patronised Kālidāsa. But Candragupta II was a king of Magadha and not of Ujjayinī, whereas Kālidāsa's patron is traditionally ascribed to Ujjayinī. I have no quarrel with persons who reject traditions altogether but I cannot understand the *ardhajaratīya* attitude of those scholars who accept one part of a tradition and conveniently ignore the other. If Kālidāsa's patron was a king named or titled Vikramāditya, he was also king of Ujjayinī; such Candragupta II was certainly not, nor so any other later Gupta king. The poet has likened the king of Avanti to the Moon, newly risen, in verse 31, but he immediately corrects himself by comparing him to the Sun in the following verse. This probably suggests that Kālidāsa was thinking of the name or title of his patron, Vikrama-āditya. But verse 36 gives us a clear allusion to this name: "As the water lily cannot love the *Sun*, so could not that exquisitely delicate princess place her heart on him who causes his friend-lotuses to bloom forth and his enemy-mud to dry up at his *valour*." We have here both a comparison with the Sun (*Āditya*) and a mention of the king's valour (*pratāpa*, a synonym for *vikrama*). I cannot therefore doubt that we have here an exquisitely fine allusion to the name or epithet (Vikramāditya) of the king of Ujjayinī. It should be noted that the simile "as the lily does not like the Sun" has not been used in the case of any other suitor, though the opposite one, "as the lotus does not like the Moon," has been used twice—*cf.* "तस्याः प्रकामं प्रियदर्शनाऽपि न स चितीशो रुचये बभूव । शरत्प्रमृष्टाम्बुधरोपरोधः शशीव पर्याप्तिकलो नलिन्याः ॥४६॥" and "स्वसुविदर्भाधिपतेस्तदीयो लेभेऽन्तरं चेतसि नोपदेशः । दिवाकरादर्शनवद्भ्रकोशे नचत्रनाथांशुरिवा-रविन्दे ॥६६॥" There was therefore something deliberate in this expression and I conclude that *Kālidāsa* has referred to

*Vikramāditya, king of Ujjayinī, in the Raghuvamśa.*¹ I would identify this Vikramāditya with the Vikramāditya of Jaina tradition, who in the first century B.C. drove out the Sakas from Ujjayinī and established himself on the throne of his (father) Gardabhilla. “इन्दु नवोत्थानमिव” in v. 31 probably refers to the new accession of this monarch and reference to the youth of the king in v. 35 points that way. It should be noted that Kālidāsa has not invested this son of Indumatī with a Purāṇic pedigree, as he has, for example, done in the case of the next king. The dynasty to which Kālidāsa thus makes reference had probably on that account but newly come to power. If we are justified in identifying this dynasty with “the seven Gardabhillas” of the Matsya, Vīṇa and Brahmandā Purāṇas (Pargiter, D.K.A., p. 46), just before the Sakas, the family was certainly a new one, provided Gardabhilla was the first king. Jaina tradition makes Gardabhilla reign for 13 years and places an interval of 135 years between his son Vikramāditya's accession and the coming back of the Sakas to power, with a Saka

¹ I told Professor Dr. D. R. Bhandarkar of my interpretation of Ra. VI. 36 and I was glad to find that I convinced him. Of course the Professor does not share my view about the date of Kālidāsa—he places him in the sixth century A.D. Professor Dr. Radhakumud Mukerji recently drew my attention to a somewhat similar interpretation by Mr. Dhanapati Banerji in Q.J.M.S. Vol. X, pp. 77-8. Mr. Banerji deduces reference to Vikramāditya from the Avantīnāthas being compared to the Sun (in v. 32 c d and v. 36 d) and from the mention of his fine physique (in v. 32 a b). Mr. Sankara (*ibid.* p. 188) rightly objects that *vikrama* (valour) is not synonymous with a manly form. Mr. Banerji's reply (p. 364) is ineffective for “वलिर्विक्रमः” (the synonym for *वैराग्य* given by the Śabdakalpādruma on the authority of Amara and Bharata and quoted with approval by Mr. Banerji) is not an exact equivalent for *vikrama* and is not even itself synonymous with a fine physique—a tall and largely built man is not necessarily *विक्रम* and we should remember that among the Pāṇḍavas “वैराग्य” has been ascribed to Arjuna and not to the giant Bhīma. I pin my faith on *pratāpa* in v. 36 c which is certainly an exact equivalent for *vikrama* and the *aditya* I search for in the same verse. I have therefore not been wholly anticipated but am in any case glad to find another worker read a reference to Vikramāditya king of Ujjayinī in Ra. VI.

interregnum of 4 years between Gardabhilla and Vikramāditya.¹ A period of 148 years is not much too long for 7 reigns. But the Vāyu and the Brahmāṇḍa Purāṇas make the Gardabhilla dynasty reign for only 72 years (“ द्विसप्ततिः ” or = 140 ?). We may therefore assume that the Gardabhilla dynasty ended with Sarasvatī’s transgressor and not begun with him. Vikramāditya, coming after the Śaka usurpation, will in any case have founded a fresh line; “ इन्दुं नवोत्थानमिव ” will apply in either case with the same force. “ द्विपद्भिः दुःप्रसहम् ” in VI. 31, may refer to the conquest of the Śakas by Vikramāditya. A similar allusion may also be contained in Ra., XI, 26-27. “ स हत्वा लवणं वीरस्तदा मेने महौजसः । अत्रुः सोदर्यमात्मानमिन्द्रजिद्वधशोभिः ॥ तस्य संस्तूयमानस्य चरितार्थैस्तपस्विभिः । शुश्रुभे विक्रमोदयं व्रीडयावनतं शिरः ॥ ” Compare also the title of the Vikramorvaśīya and “ दिष्ट्या महेन्द्रोपकारपर्याप्तेन विक्रममहिम्ना वर्धते भवान् ” (B.S.S., 3rd ed., p. 16), “ अनुत्प्रेकः खलु विक्रमालङ्कारः ” (p. 18), etc., of its text.²

¹ Z.D.M.G., Vol. XXXIV, pp. 254, 267. The *Periplus* seems to supply an interesting confirmation of one of these particulars by calling the city of Ujjayinī “formerly a royal capital.” Ujjayinī probably passed about 78 A.D. into the hands of the Śaka prince Caṣṭana who may not have removed his capital there. Prior to this event the city must have formed for a long time the capital of a Hindu principality (connected, as numismatic evidence indicates, with the Andhra Empire). The *Periplus* does not record its date and there is great diversity of opinion on the point. Mr. Schoff in the Introduction to his translation (pp. 7-15) declared in favour of 60 A. D. but the view of the scholars of his ‘Second Group’ (80-89 A. D.—p. 292) commend itself to me. Mr. Schoff has, however, subsequently accepted 80 A.D. (See Smith, E.H.I.,⁴ p. 245, n. 2); Ujjayinī must have then recently lost its independence. Caṣṭana’s successors seem, however, to have shifted their capital to that holy city.

² I have given above complete reference to the sources of the legend of Kālakācārya, Gardabhilla and the Śakas. But as the texts are not well-known and as the Cambridge History of India, which has published a summary, has not yet attained the popularity it fully deserves, I give below two extracts from it, at the suggestion of my friend Mr. Nirendranath Ray Chaudhuri of the Bangabasi College, Calcutta:—

The next king is Pratipa of Anūpadśā. The fact that the description opens with an account (vv., 38—40) of his legendary ancestor Kārtavīrya and that Pratipa is himself declared in verse 12 as superior to the legendary Parasurāma probably shows that there was no real Indian dynasty ruling the land in Kālidāsa's time. But the mention of the province

Only one legend the *Kālaśūchāya Kālāṅkala* the Story of the Teacher Kālaka tells us about some events which are supposed to have taken place in Ujjain and other parts of Western India during the first part of the first century B.C. or immediately before the foundation of the Vikrama Era in 58 B.C. This legend is perhaps not totally devoid of all historical interest. For it records how the Jain saint Kālaka having been insulted by King Gardabhilla of Ujjain who according to various traditions was the father of the famous Vikramāditya went in his desire for revenge to the land of the Sakas whose king was styled King of Kings (*Sāhān Śm*). This title in its Greek and Indian forms was certainly borne by the Saka kings of the Punjab Maues and his successors, who belong to this period and as it actually appears in the form *Shaonano Sino* on the coins of their successors the Kushāna monarchs, we are perhaps justified in concluding that the legend is to some extent historical in character. However this may be the story goes on to tell us that Kālaka persuaded a number of Saka satraps to invade Ujjain and overthrow the dynasty of Gardabhilla. But that some years afterwards, his son, the glorious Vikramāditya repelled the invaders and re-established the throne of his ancestors. What the historical foundation of this legend may be is wholly uncertain—perhaps it contains faint recollections of the Scythian dominion in Western India during the first century B.C. In any case it seems undoubtedly to give further proof of the connexion of the Jains with Ujjain, a fact indicated also by their use of the Vikrama Era which was established in the country of Mālwa of which Ujjain was the capital. (Charpentier, pp 167 s)

But a few years later c 75 B.C. there arose another formidable power on the west. The Scythians (Sakas) of Bactria had occupied the delta of the Indus, which was known thereafter to Indian writers as Sakadvīpa the doś of the Sakas and to the Greek geographers as Indo Scythia. The memory of an episode in the history of Ujjayini as it was affected by this new element in Indian

shows that there was a separate kingdom there. I therefore infer that foreigners were probably reigning there. If Māhīṣ-matī, the capital, was to the south of Ujjayinī in Avanti, and the same as the modern Mandhātā on the Narbadā in the Nimār district of C. P.,¹ the province was probably under Śaka rule in the middle of the first century B.C., possibly even after Vikramāditya's driving away of the Śakas from the Ujjayinī region. But Śaka rule also prevailed there in the fourth century A.D., in whose last decade Candragupta II

politics may possibly be preserved in the Jain story of Kālaka, which is told in chapter VI, pp. 167-8. The story can neither be proved nor disproved; but it may be said in its favour that its historical setting is not inconsistent with what we know of the political circumstances of Ujjayinī at this period. A persecuted party in the state may well have invoked the aid of the warlike Śakas of Śakadvīpa in order to crush a cruel despot; and, as history has so often shown, such allies are not unlikely to have seized the kingdom for themselves. Both the tyrant Gardabhilla, whose misdeeds were responsible for the introduction of these avengers, and his son Vikramāditya, who afterwards drove the Śakas out of the realm, according to the story, may perhaps be historical characters; and, from the account which represents Vikramāditya as having come to Ujjayinī from Pratishthāna, we may infer that they were connected with the Andhras.* It is possible that we may recognise in this story the beginnings of that long struggle between the Andhras and the Śakas for the possession of Ujjayinī, the varying fortunes of which may be clearly traced when the evidence of inscriptions becomes available in the second century A.D.† With the imperfect documents at our disposal, we can do little more than suggest such possibilities. It is hopeless to attempt to discriminate between the elements which may be historical and others which are undoubtedly pure romance in the great cycle of legend which has gathered around the name, or rather the title, Vikramā-

¹ See, C.H.I., I, pp. 173, 531 and map 5, also map in Pargiter's *Ancient Indian Historical Traditions*.

* These kings belonged probably to the family of Gardabhillas, who appear in the *Purāṇas* among the successors of the Andhras; see *Kālī Age*, pp. 41-6, 72.

† B. M. Cat., *Andhras, etc.*, pp. xxxv, xxxvi,

conquered these parts from the Western Satraps. The passage is therefore indicative for our purpose and we may pass on to the next king, Susa of Śūri-ena. This prince is described in v 46 as belonging to the legendary Nipa family¹ and the same logic ought to indicate that there was a foreign power reigning in Mathurā regions in Kālidāsa's time. The Śakas were certainly there in the first century B. C.² But can any such thing be said in the Gupta period? The Arjunīyanas, an old Ksatrya tribe,³ were reigning to the west of the Mathurā region in Samudra-Gupta's time as his feudatories (Allahabad Inscription, l. 22) and Mathurā was certainly included within Gupta territory, as the verse (?)

ditya the Sun of Night Many kings at different periods and in different countries of India have been so styled and it seems that the exploits of more than one of them have been confused even in those legends which may be regarded as having some historical basis. While it is possible nay even probable that there may have been a Vikramāditya who expelled the Śakas from Ujjayinī in the first century B.C. it is certain that the monarch who finally crushed the Śaka power in this region was the Gupta emperor Candragupta II Vikramāditya (380—414 A.D.). Indian tradition does not distinguish between these two. It regards the supposed founder of the era which began in 53 B.C. (p. 371) and the royal patron of Kālidāsa, who lived more than four hundred years later as one and the same person. (Rapson pp. 532-3)

I am trying to show that our poet lived in the court of Gardabhalla's son (Vikramāditya) and not Candragupta II (Vikramāditya). But I am not concerned with the personality of the founder of the Sambat Era. Sarasvatī, referred to above in my text, was Kālākāśyapa's sister and a nun. Gardabhalla violated her and brought on himself the vengeance of Kālaka Sūri.

¹ Nipa, the founder of the line belongs to the South Pāṇḍya dynasty and is No. 66 in Pargiter's list (Ancient Indian Historical Tradition p. 148). See *ibid* pp. 117, 166, 231.

² See Kālakaśūtrīprabandha (an Prabhāvalacarita) v. 67
 दृष्ट्वाभारतं विदुषां विचार्य कृतः । दृष्ट्वा भारतवर्षं विदुषां विचार्य ॥ V. A. Smith
 E.H.I. p. 241. Rapson C.H.I. I p. 525.

³ Ganapātha on Pāṇini, IV 2. 80. C.H.I., I, p. 526.

stone inscription at Mathurā of Candragupta II (Fleet's No. 4) clearly indicates. Kālidāsa's mention of a king at Mathurā and the manner of his description can therefore be understood only in the first century B. C. As Kālidāsa's contemporary ruler (or Satrap) of Mathurā did not belong to a native dynasty, he had to select Indumatī's contemporary from the pre-historic period. But does "नृपं तमावर्तमनोज्ञनाभिः सा व्यसगादन्यवधूर्मवित्री । महीधरं मार्गवशादुपेतं स्रोतोवहा सागरगामिनीव ॥" (v. 52) indicate that Kālidāsa was now thinking of the contemporary ruler, an undesirable foreign Satrap, fit to be likened to an obstruction?

The next king is Mahendra of Kalinga about whom I have already said much. The reference to the Spice Islands and their produce in verse 57 ("द्वीपान्तरानीतलवङ्गपुष्पैरपाकृतस्वेदलवामरुद्धिः") is, as pointed out by Mr. Sankara,¹ intelligible after 75 B. C., the date of Kalinga colonisation of Sumatra and is a humorous bit of anachronism in Kālidāsa's usual style. I shall once again draw attention of my readers to Ra. VI, 58 c. d. "तस्मादपावर्तत दूरकुटा नीलेव लक्ष्मीः प्रतिकूलदैवात्" and my explanation of it in the light of Khāravela's mischiefs in the territory of the Bhojakas.² After Mahendra comes the king of Pāṇḍya to whom Kālidāsa has forgotten to give a name³. I need not say here anything more about this king. "सञ्चारिणी दीपशिखेव रात्रौ यं यं व्यतीयाय पतिंचरा सा । नरेन्द्रमार्गाद्विह्वले प्रपेदे विवर्णभावं स स भूमिपालः ॥" probably sums up without specific mention Indumatī's passage before some other kings. We have next the description of Aja and Indumatī's bashful acceptance of this prince. As Aja belongs to the original story we should

¹ I.H.Q., I, p. 315.

² That Rāṣṭrikas and Bhojakas do not mean particular peoples, outside the Kalinga territory, but Khāravela's own provincial and local (!) governors (Luder, E. I., X, suppl. p. 161, R. D. Banerji, J. B. O. R. S., III, p. 500) seems impossible to me. I have Mr. Jayaswal (J.B.O.R.S., III, p. 455) and Mr. Rapson (C. H. I., I, p. 535) on my side. Mr. Jayaswal rightly says, "But nobody would think it important enough to mention in an inscription the respect one receives from one's servants or officers."

³ Or was it because the poet could not coin a name from the Purāṇas for the "इन्द्रोदरस्यागतनुः" Dravidian chief?

not suppose that Kālidāsa has alluded to a contemporary king of Ayodhyā. No historical conclusion should therefore be drawn from this separate mention of the state of Uttara-Kośala¹ and I must now take leave of the sixth canto of the Raghuvamśa.

But leave of the Raghuvamśa we may not take yet. The Gupta period theorists will say here that allusions to the Gupta kings and to their family are too many and too obvious in the Raghuvamśa to admit of any explanation other than the Gupta patronage of Kālidāsa. But we should remember that the Guptas are not really kings of Avanti with which tradition associates Kālidāsa's Vikramāditya and where the poet certainly lived. The large number of derivatives of the root *gup*² are noticed in Kālidāsa only

¹ The Gupta period theorists need not therefore be troubled by the fact that Ayodhyā was included within and was a capital of the Gupta empire (V. A. Smith F. H. I. p. 310). My own attitude is just this. I do not want to read history where it is not called for. The texts should be studied from their own points of view and if any historical conclusions can be deduced they should not contradict the internal data of the texts. This is unfortunately not usually done. In the question of Kālidāsa's date we have often theory first and interpretation of the text afterwards, instead of text before theory. Similarly historical facts should not be interpreted in the light of Kālidāsa and then compared with his own statements. Mr. Radha Govinda Basak's paper on the Historical basis for Raghuvamśa conjures, though very learned and full of acute suggestions is vitiated by this mixing up of evidence.

रसादेन। कालदासः कदाचित्। In Me 47 (or 41) is taken to suggest that at the time of the composition of that great lyric Śaṇḍa Gupta had his residence fixed in Avanti probably in Ujjain and that he was placed in charge of the king's (cf. the title *Mahendraditya* as used by king Kumāra Gupta II) army. (Proceedings of the Calcutta Oriental Conference p. 326). But unfortunately for Mr. Basak Kālidāsa places Śaṇḍa not in Ujjayinī but on Mount Devagiri (mentioned in the previous verse) which is at some real distance from that city. How is it also known that Śaṇḍa Gupta as a prince was a general of his father's troops stationed in Ujjayinī? The chronological order of the different works of Kālidāsa should also be fixed on purely internal evidence and not on supposed historical allusions. The Kumārasambhava which is certainly earlier than the Raghuvamśa is placed by some scholars after that work just to suit the theories about the historical allusions.

² To which Professor Dr. Meghnad Saha of our Physics Department draws my attention.

on account of the theory. *A similar list can be made out from Āśvaghoṣa's works but no one will dare suggest that the Buddhist philosopher lived in the Gupta period.* *Samudra* and *Candra* are too familiar terms in poetic vocabulary to call for any especial notice or historical explanation in the case of Kālidāsa's use. I would not urge any grammatical objection against the late Mr. Harinath Dey's interpretation of "आसमुद्रचितीशानाम्" (Ra. I, 5), for a secondary meaning of 'lords of the earth since Samudra-Gupta' is *a-priori* not impossible.¹ But when I compare the other alleged references to Samudra-Gupta or Candra-Gupta I lose all faith in this method. If the Guptas were lords of the earth since Samudra-Gupta, the poet could not possibly speak of his son Candra-Gupta II as *purser* than him; for that would be the meaning of Ra. I, 12, "तदन्वये शुद्धिमति प्रसूतः शुद्धिमत्तरः। दिलीप इति राजेन्दुरिन्दुः चीरनिधाविच ॥" Above all, Ra. XVII, 71 "प्रवृद्धौ हीयते चन्द्रः समुद्रोऽपि तथाविधः। स तु तत्समवृद्धिश्च न चाभूत्ताविच चयी" clearly shows that Kālidāsa never wanted to flatter the Gupta kings Samudra-Gupta and Candra-Gupta II. If Dilīpa is incidentally likened to Candra-Gupta II, born of Samudra-Gupta, in Ra. I, 12, how do you explain Ra. III, 17 "निवातपद्मस्तिमितेन चक्षुषा नृपस्य कान्तं पिबतः सुताननम्। महोदधेः पर इवेन्दुदर्शनाद् गुरुः प्रहर्षः प्रवभूव नात्मनि ॥" where the self-same Dilīpa is compared to *Samudra* (or its swelling) and his son Raghu to *Candra*? Why do you notice only such passages as suit your theory and overlook the rest? An unprejudiced study of these references should convince one that Kālidāsa has used only the language of poetry and he has in his usual way² constantly varied his similes. As regards the alleged frequent references to Kumāra or Skanda, they may be also paralleled from the Buddhacarita; and we should not blind ourselves to

¹ Nor would I say with a well-known Professor of English, at Calcutta that Kālidāsa has even referred to Candra-Gupta's *Sālā* (Bengali for *Syāla* = 'brother-in-law') in Ra., XIII, 40 "वियद्गतः पुष्पकचन्द्रगाला." etc.

² Kālidāsa's rich fund of similes is proverbial.

the fact that Kālidāsa was a devout Śiva¹ and frequent references to Śiva's son would be but natural here. I have already suggested one possible historical ground for the writing of the *Kumārasambhava*. Kālidāsa may also have been making frequent visits to the temple of Kārtikeya in Mount Deogarh alluded to in the *Meghadūta*. Speaking of historical allusions, I may refer to Ra. VIII, 2 "दुर्तिरपि कुमुदाम्रसादप्रयतन्ते नृवत्सवो हि पत् । तदुत्पत्तिमप्रदीद्व विनुराशेति न भोगदृष्या ॥" where the poet has probably the well-known paricide Ajātasatru in mind. The allusion, if meant, could hardly be understood in the fourth or fifth century A.D. Bāṇa, writing in the seventh century, has preserved for us many anecdotes of the Śunga period but he has throughout given us the names. Kālidāsa, if writing in the first century B.C., did not need to take the name of Ajātasatru and his indirect reference² could be easily understood by his contemporaries.

The possible transference of the Gupta capital to Ayodhyā is supposed by some to have been alluded to in Kuśa's return to Ayodhyā, described in *Raghuvamśa*, Canto XVI. But Kuśa returned to Ayodhyā and did not go there for the first time, as the Guptas did, and Kuśa's return is most probably given in the legends from which Kālidāsa draws his story and not invented by the poet. The establishing of a second capital at Ayodhyā may, on the other hand, have been as much due to a wish to rival or at least imitate the glories of the famous Ikṣvāku (so beautifully sung by two of India's greatest poets) as to administrative necessities. Pure administrative necessity would probably have led to the choice of a more westerly city like Mathurā or a more central place like Allahabad. We should remember that the Guptas were Hindu revivalists and they would

¹ Compare among others, the *nāndī-stoṭras* of the *Mālavikāgnimitra*, the *Vikramorvasīya* and the *Abhijñānaśakuntala*, the *bhārata rājya* of the last, the first verse of the *Raghuvamśa* and the theme of the *Kumārasambhava*.

Of course if meant

naturally choose a royal city famous in Hindu tradition. Some direct influence of Kālidāsa's Raghuvamśa is possible here. I have already spoken of a possible influence of this epic on the conduct of Samudra-Gupta. I have a suspicion that the early Gupta kings were great admirers of Kālidāsa's works. One work of our poet was probably carried to Magadha (and Bengal) by some Gupta king. The Bengali recension of the Śakuntalā spells the name of the hero as *Duṣmanta*,¹ whereas all other texts spell it as *Duṣyanta*, even the Kashmir recension² which is in many respects similar to the Bengali text. The inference is natural that in the first codex of the drama brought to Bengal the subscript *y* was misread as *m*. The two letters, therefore, or their forms in subscript were so very similar that one could be mistaken for the other ; but as *y* seldom changes form in a ligature the ordinary letters *y* and *m* must have had the same look. We find this similarity in the Bilsaḍ Stone Pillar Inscription of the time of Kumāra-Gupta (Fleet's No. 10, Plate V).³ I therefore infer that the arch codex of the Bengali Śakuntalā was brought some time in the reign of Kumāra-Gupta or in that of his father Candragupta II, the conqueror of Mālwa. A drama would ordinarily circulate within narrow limits, unless specially favoured by the position of the writer. But a good poem would reach distant regions earlier than the dramas of the same author. Āśvaghoṣa's Śāriputraprakaraṇa, for example, had a more limited circulation⁴ than his poems. Similarly Kālidāsa's dramas too may have been for long confined more or less to the Malwan stage and been carried to distant Magadha and Bengal by

¹ See, e.g., Pt. Prem Chand Tarkavāgiśa's text, Calcutta, 1860, p. 3.

² See Burkhard's Die Kashmirer Sakuntalā-Handschrift, Vienna, 1884, p. 21.

³ See Table IV, column IV, rows 31 and 32 in Bühler's Indische Palaeographie (Tafeln) and the form of the *m* in *Brahmanya-devasya* of the Bilsaḍ Inscription, l. 7, in Fleet's plate.

⁴ As is clearly indicated by its total disappearance from India!

only Candragupta II, conqueror of Malwa, or his son. In mediæval Bengali versions of the *Sakuntalā* story and in some Bengal manuscripts of the *Mahābhārata* too we find the spelling *Duṣmanṭa*, obviously under the influence of the popular drama of *Kālidāsa* as current in Bengal. But there are manuscripts in Bengali character, e.g., some of the Mss. of the *Padmapurāṇa* used by my friend Professor Haradatta Śarmā for his text of selections from the *Padma-Purāṇa*,¹ which spell the name as *Duṣyanta*.

That the nineteenth canto of the *Raghuvamśa* was not the last, as Mr S P Pandit supposed,² cannot be seriously believed. The fact that the poet has rushed a number of unimportant kings through the eighteenth canto shows that the poet is coming towards the end. But an artistic winding up required that there should be a little more leisurely movement and we have that in the nineteenth canto. The amours of Agnivarna in the last canto of the *Raghuvamśa* correspond to the eighth canto of the (unfinished) *Kumārasambhava*, the last that left his pen. But this nineteenth canto of the *Raghuvamśa* does not show that the writer was a voluptuary, *Kālidāsa*'s moral tone is fully manifest in vi 48—53. Agnivarna's tragical culmination conveys a moral and is suggestive to historians. *Kālidāsa* probably saw the inglorious end of a glorious line of kings through the debaucheries of the last king. And that line was most probably the family of the Sungas with whom *Kālidāsa* was in deep sympathy and the Agnivarna among the Sungas was probably Devabhūmi who was slaughtered by his indignant Brahmin minister Vasudeva.³ It should be noticed that *Kālidāsa* makes the ministers of Agnivarna hide the news of the king's death and secretly

¹ *Padmapurāṇa* and *Kālidāsa*, Calcutta, 1920.

² Preface to his edition of *Ra.*, Vol III preface pp 14-18.

³ कालिदासः समुद्रगुप्तस्य कालावस्थं विवक्षितं इत्युक्तं; दशमस्कन्धे लघुचरिते च उल्लेखो भवति इति । (Pargiter D. H. I. pp 33-4) कालिदासस्य समुद्रगुप्तस्य कालावस्थं विवक्षितं इत्युक्तं दशमस्कन्धे लघुचरिते च उल्लेखो भवति इति । (Harnsacanta Uc VI Vidyāsāgar's ed p 173 Nirmalsagar ed. p 199)

consume his body in fire under the pretext of performing some propitiatory rites for the king's recovery. Some connexion with what Vasudeva Kāṇva did is quite evident. I may also point out that the names of many of the Śuṅga kings ended in—*mitra*=the Sun and the Śuṅgas could therefore be thought of in connexion of the Raghus of the solar race. Another sensual king could have been also thought of by our poet when he wrote of Agnivarṇa, *viz.*, Gardabhilla of Avanti, who brought on great misfortune to his whole kingdom by his debaucheries culminating in the forcible abduction of Sarasvatī, the sister of Kālakācārya. It is possible, as I have said already, that this Gardabhilla came at the end of the Gardabhilla dynasty and was not Gardabhilla I.¹ Nurture of his son (Vikramāditya) under Śātavāhana protection and the regaining of the family glory through that prince may have something in common with the careful nourishing of the posthumous son, the hope of Agnivarṇa's line, referred to at the end of the Raghuvamśa. *Āditya* of the Malwan prince's name or epithet easily lends itself to a veiled comparison with the kings of the solar dynasty. The Raghuvamśa was, therefore, not purely tragical in its culmination; it ends with a hope for a glorious king.

That Kālīdāsa could be contemporary with Agnimitra, as is inferred by Mr. S. Ray² from only the *bharata-vākya* of the Mālavikāgnimitra, “आशास्यमन्यधिगमात् प्रभृति प्रजानां सम्पद्यते न खलु गोक्षरि नाग्निमित्रे”, seems to me to be altogether impossible. Agnimitra's foibles as well as his excellences and also those of Irāvati (and Dhārīṇī) are described in the drama with a certain amount of humorous freedom and it is absurd that a contemporary poet could thus flatter Agnimitra. That there is something strange in the *bharata-vākya* I admit; but acknowledging a problem is better than offering a cheap

¹ The Śaka interregnum would create a gap and continuity of the line through this gap would not be spoken of. A culmination of the line, in Sarasvatī's transgressor seems therefore more natural.

² Sakuntalā, 5th ed., 1920, Introduction, pp. 28, 29.



terracotta Plaque from Bhilsa (Reproduced from photograph kindly supplied by the Director General of Archaeology India)



The same (Reproduced from the Cambridge History of India Vol I by kind permission of the Cambridge University Press, London)

traditions of a still earlier epoch was based, according to Dhanika, on the *Byhatkathā*.¹

The evidence of the *Bhīṣṭā* medallion, on which Mr. S. Ray² has pinned his faith so much, fails to convince me, and I shall not cite it in favour of a first century B.C. theory. How can we be altogether certain that it is a work of the Śuṅga period? Then, does it really picture the opening scene of the *Śakuntalā*? We have a fine reproduction now of the medallion in an easily accessible volume³ and its close scrutiny reveals important differences. There is no deer running before the horses. It cannot be urged that want of space to the right hand side induced the engraver to put the deer at the bottom, for we have two animals there and not one as in *Kālidāsa's* story. Then *Kālidāsa* makes two hermits (three in the *Devanāgarī* recension) come and stop the king from his cruel quest, whereas we have here only one individual standing before the horses, with hands outstretched (to bid the party welcome?). Again, the person driving the horses with a whip in his right hand looks youthful and has got something like a crown on his head and can hardly answer to *Duṣyanta's* elderly charioteer. The other person seated on the chariot has neither a crown on his head nor a bow in his hand. Then again, who are the individuals at the top of the medallion? With all these fundamental differences, how can the picture represent the opening scene of *Kālidāsa's* immortal drama? I therefore set aside the allegation that its testimony places *Kālidāsa* in the first century B.C. or earlier,⁴ and I place

¹ *Avaloka of Dhanikā*, com. on the *Daśarūpaka*, *Nirnayaśāgar* edition, Bombay, 1917, p. 34. No such tradition is on record about *Kālidāsa's* obligations. May we, not therefore conclude that he had only living memory of the Śuṅgas to go by?

² *Śakuntalā*, Introduction, pp. 9-10. Mr. Sankara too has used its testimony with approbation (*I.H.Q.*, Vol I, p. 313).

³ *Cambridge History of India*, Vol. I, Plate XXIX. See two impressions of the plaque in the annexed plate.

⁴ With much diffidence I propose to take the plaque as depicting the scene of the aged man sent by the gods (pictured at the top?) to create the first impression of *vairāgya* in the prince *Siddhārtha's*

my hopes on the nature of the resemblances between Aśvaghoṣa and Kālidāsa, as hinted in my *pratyāṣā* verses. My case fails if those resemblances (by the decisive character of some and the cumulative effect of the rest) do not establish my point. But my present conviction is that they do¹ and in such a way that if Kālidāsa is not removed from the fourth or the fifth century after Christ, Aśvaghoṣa will have to be brought down from the Kusān period or all the passages in his works resembling Kālidāsa will have to be pronounced as post-Kālidāsean interpolations. If such an *abhyupagama* is made by anybody for the sake of argument, I am certainly silenced. But

“अप्यस्येति मम दोषेति समानधर्मः, कालो ह्ययं निवर्धिविपुला च पृथ्वी”

I have not answered one very strong set of arguments, against an early date for Kālidāsa, viz., those based on Kālidāsa's knowledge of (Grecian) astronomy and astrology. This I leave to more competent hands. I may, however, ‘दिनातिमात्रादुपपन्नसंज्ञा’, make a few remarks here. Kālidāsa certainly knew the *rāśis* and the planets and probably also the *lagna* (and perhaps the week days too). But when the Sarnath inscription of Rājā Aśvaghoṣa of c. 150 A.D.² clearly indicates the knowledge of solar days and consequently of *rāśis* on which they are based and when Āryadeva in the same century mentions *vāra* and *rāśi*,³ when the Divyāvadāna (XXXIII, p. 642) and the Baudhāyana Dharma Sūtra (II 5 23) show a knowledge

mind when he was out on a drive. The man in front whom I take to be stretching out his hands in welcome may really be the old man with no control over his limbs. [I am informed by Rai Bahadur Daya Ram Sahni that some Buddhist remains have been discovered in that region.]

¹ Of course such scholars as do not already possess an intimate acquaintance with Kālidāsa and Aśvaghoṣa will not be convinced by what I have said above but such an acquaintance is essential for the correct evaluation of all internal evidence. As limitations of space obliged me to be very brief in comparing the two writers, I fear much of what I have said will remain obscure to my readers, unless they should have the texts discussed open before them when going through this paper.

² Lüders No 922 E.L., Vol VIII pp 171 2

³ J.A.S.B. 1898 p 181

of the planets, why must Kālidāsa's knowledge be made possible after 200 A.D.? Archæologists often unconsciously suggest by their writings that inscriptions give currency to a usage,¹ but others may be excused if they believe that it is prevalent customs and knowledge that they reflect. Kauṭilya, as admitted in Mr. Sankara's earlier paper,² shows some knowledge of planets and their conjunctions. Though the genuineness of the Arthaśāstra is now doubted in several quarters, I am personally certain that it is a work of the fourth century before Christ.³ Cannot a further increase of

¹ See, e.g., Prof. Dr. Bhandarkar in the Bhandarkar Commemoration Volume, p. 189, ll. 10-13.

² Q.J.M.S., IX, p. 21.

³ The work has the stamp of antiquity on it. Even the vocabulary and syntax bespeak an early date. The *vidyāsamuddesa* section should be particularly noticed. Its four-fold division of the *vidyā*s attained such popularity that the author of the metrical Manu-Smṛti, based on a Mānava Dharma Sūtra, adopted it, though the Mānavas in olden times accepted only three *vidyās*, an information known both from the Arthaśāstra and the Nitisāra of Kāmandaka. The Manu-Smṛti is usually assigned to about 200 A.D. But my study has led me to the conclusion that the work is nearer the upper limit assigned by Buhler than the lower one. Mr. Jayaswal has placed its composition in Puṣyamitra's time and M.S., I 99-101, II. 87. etc., support him. The Arthaśāstra should therefore be earlier than the second century B.C. That Kauṭilya defines Ānvikṣakī as Sāṅkhya, Yoga and Lokāyata should also prove his antiquity. Vātsyāyana, the author of the Nyāya Bhāṣya, who certainly lived before 400 A.D. (Keith. Indian Logic and Atomism, pp. 27-8) obviously refers to "प्रदीपः सर्वविद्यानानुषासः सर्वकर्मसाधु । आश्रयः सर्वधर्माणां सर्वदानोद्वेगो नशः ॥" of the Arthaśāstra, *vidyāsamuddesa* section (2nd ed., p. 7), in his own "सैन्यान्वोद्वेगो, प्रदीपः सर्वविद्यानानुषासः सर्वकर्मसाधु । आश्रयः सर्वधर्माणां सर्वदानोद्वेगो नशः ॥" (Nyāyabhāṣya, Viz. ed., p. 7). It should be noticed that with the author of the Arthaśāstra, Ānvikṣakī means Sāṅkhya, Yoga (= Vaiśeṣika ?) and Lokāyata, whereas Vātsyāyana understands it in the sense of Nyāya alone. Why is it that comparisons are made between Megasthenes and Kauṭilya to decide on the latter's date? Tradition says that Cāṇakya retired to forest after leaving Candragupta's government under the charge of Rākṣasa. If he wrote a manual of politics for the guidance of the Maurya, its dictates would not be necessarily binding on the conduct of Rākṣasa or his royal master. The mistake is commonly made that actual practice can be gauged from the law books. But unfortunately there has always been a great difference between theory and practice. Non-mention of Kauṭilya in Megasthenes' work cannot cast any doubt on his existence for tradition makes the Brahmin

knowledge, resulting in the use of *rāsis* and of week days, be understood in two or three centuries more? Most of the astronomical or astrological concepts found in *Kālidāsa* were evolved in Greece ' earlier than the middle of the first century B.C.,

return to his forest almost immediately after Candragupta's accession and the foreign ambassador would neither meet him nor hear of him. Besides we cannot be sure that Megasthenes did not refer to him for his work has not come down to us in its entirety but only in a few quotations in other works. It is notorious that writers of summaries often omit important facts. Can we therefore expect that the Greek and Roman historians or naturalists, who have quoted, paraphrased or summarised such passages in his work as had a bearing on their respective topics, have between them preserved for us all that was important in the *Indica*? I have therefore little faith in the conclusions of Dr Otto Stein though Professor Dr Winternitz and some other scholars have accepted them. There are fairly old traditions extant for *kaṇṭhya*=*Cāṇḍi*'s authorship of a text on Statecraft and we may safely believe that the text published by Dr Shama Śāstri is in its essentials the same as left the pen of Candragupta's first minister in the fourth century B.C. The figure given by the seventh century writer Dandin for the extent of the work—*सप्तमहाभाष्ये षड्विंशति सर्गैः सम्यक्* (Dasakumāracarita, 21b Uchchvāsa, N S P ed. 1917 p 236)—agrees with the Mysore text. The *śāṅkhya* (now) in Dandin's statement may perhaps be with reference to the characters of the story who are placed in an early age. Dr N Law has given us a lengthy reply (Cal Rev, Sept. Dec. 1924) to Professor Winternitz's objections. Some more discussion of the question is expected shortly from Dr Law and other scholars (especially over Dr Stein's recent evidence of *surunga*=*सुरङ्ग*). [See H C Ray on the *Arthashastra* in recent numbers of the I A.] Whatever date scholars may finally agree upon for the *Arthashastra* my position about *Kālidāsa* remains unaffected.

I may not speak of the ultimate Babylonian source of Greek astronomy (and astrology) not even in view of the recent findings at Harappa and Mahenjo Daro for I am contented to accept immediate Grecian origin of a good deal of *Kālidāsa*'s astral lore. *Jāmītra* if that is the true reading of Ku. VII 1 is certainly a (happy) Sanskritisation of the Greek *Ζαμιάτρης*—to be paralleled by the *वर्षा* of a nineteenth century orthodox Pandit of Bengal for the English word stupid. But the system of seven-day weeks need not have been borrowed from Greece or Rome. The system was in currency in Western Asia since earliest times (En. Br. IV p 908) whence India could have obtained it directly. As regards the supposed Sumerian findings of the Indus region it is too early to use their implications. The Aryans may have entered India after the Sumerians (or Elamites or whoever they may have been) left the land (or migrated southwards) or may have failed to learn anything substantial from these *more civilised* natives at the first blush of their acquaintance. We have a parallel

at least about 125 B.C., when Hipparchus made his calculations.¹ This astronomer knew, as Mr. A. C. Banerji of our Mathematics Department assures me, of all these things (and even of the precession of the Equinox). Could not these ideas have entered at least some part of India in the first quarter of the first century B.C.? In historical arguments, India is often looked upon as a small country where the same knowledge and the same customs are supposed to prevail equally everywhere. But, unfortunately, India has always been (and even now is) a vast continent, where knowledge and customs have differed (and do still differ) from province to province. Avanti in Western India was in the first century B.C. in almost as active communication with Greece and Rome, through the port of "Barygaza" (=Bhrgukaccha), as the extreme south;² much astronomical lore could thus pour into Ujjayinī from the West through sea-faring merchants. That city early became a strong centre of astronomical studies and scientific astronomy would evolve

case in Greek history. Direct contact between western India and western Asia is, however, testified to by the Bāveru Jātaka (the Suppāraka Jātaka) and the Periplus of the Erythrean Sea. There could thus be a substratum of Babylonian astronomy in the astral science of Ujjayinī, which could quickly acquire a scientific character under the influence of Hipparchus and others.

¹ See Encyclopædia Britannica, 11th. ed., vol. II, p. 797, for the date and origin of Greek astrology.

² See, among others, H. G. Rawlinson's India and the Western World, Ch. V and VI. To quote Professor Keith, "We know that Alexandria under the Lagidai became a great centre of Greek learning, and that between Alexandria and Ujjayinī through the port of Barygaza there was a brisk exchange of trade which may have aided in intellectual contact." (Sanskrit Drama, p. 60). The Lagideai are the Ptolemies who reigned in Egypt from the fourth century B.C. to the first. Hipparchus though a native of Bithynia (in Asia Minor) resided for some time in Alexandria (see Smith, Dictionary of Greek and Roman Antiquities). It was from Barygaza that the embassy of king Pandion or Poros sailed about 27 B.C. (Strabo XV. 73). See Periplus of the Erythrean Sea (§ 48) about the trade connexions of Ujjayinī with Europe in the first century A.D. (and earlier?). Ujjayinī was "the great emporium of the period." (C.H.I., I. 517). See also Sten Konow in Modern Review, April, 1921, p. 467, c. 2.

there earlier than in many other parts of India. If Kālidāsa, a man of this region, shows a knowledge of scientific astronomy in a rather early epoch, one should have no matter for surprise. The manner in which Kālidāsa has purified his astronomical learning indicates the popularity of the study in that region, and probably also its recent introduction there. The *Mṛcchakatika*, which I believe to be of about the same age, also makes astrological references (IX. 33, etc.) The Śātavāhana prince Hāhī writing in the first century A.D. in the Andhra country shows a knowledge of week days (*Septa-Satī* III. 61), and that implies much knowledge of scientific astronomy and cognate astrology.¹ The close relation that the Andhras had with Ujjayini in this period is well-known.² Can we not suppose that Kālidāsa living in Ujjayini in the previous century possessed the knowledge of week days, *rāśis*, planets and all that gear? Ujjayini may have been an emporium not only of merchandise but also of scientific ideas. That Kālidāsa does not seem to possess a scientific knowledge of the cause of an eclipse³ should speak for his antiquity. I could not therefore find anything in the astronomical objections to necessitate the abandoning of Asavaghosa's testimony. I cannot help believing that the current theories about the date and nature of borrowings from Greek Astronomy stand badly in need of revision.⁴

¹ See in this connection K. P. Jayaswal in I. A. 1918 p. 112.

² CH. I pp. 531-4.

³ The interpretation of Ra. XIV. 40 proposed by S. P. Pandit has long been abandoned by scholars. The *malā* of the Moon is not the occasional obscurity but the constant dark spot. Kālidāsa is therefore earlier than at least Āryabhaṭṭa (500 A.D.).

⁴ I could not understand the significance of Mr. Sankar's remarks. Now the *Balance (tula)* which always figures as a distinct sign in Hindu astrology was unknown even to Hipparchus (c. 120 B.C.) and appears first in Ptolemy and Varro (c. 100 B.C.). Kālidāsa must therefore have lived after 100 B.C. (I. H. Q., I p. 315). What has Kālidāsa to do with the *tula*? He does not name it. The *tula* would form the *jyotiṣa* "house" only if the *lagna* was in *meṣa*. It is not true that this *rāśi* was not in the Zodiac before Ptolemy and Varro. The Zodiac was divided into 12 "houses".

When discussing the date of Kālidāsa I have kept in mind only the scholars who decide in favour of the fourth or fifth century A.D., because I can never seriously think of the sixth century as a possible time for our poet's life. Vatsabhaddi, the writer of the Mandasor Inscription of the time of Kumāra-Gupta II and Bandhuvarman (Fleet's No. 18—of c. 474 A.D.), was most certainly under the influence of Kālidāsa's writings.¹ And our poet can never be placed after him. I have read the inscription carefully and I could find nothing to doubt the obligation of the writer to Kālidāsa, already surmised by several scholars.² I have also noticed the influence of Kālidāsa in the Bhitari Stone Pillar and the Junnagarh Rock inscriptions of Skanda-Gupta; but I reserve all this for a separate treatment. Bhāravi too can never be placed before Kālidāsa (see I. A., 1918, pp. 249-250). One scholar who believes in the sixth century theory gave me as his reason the fact of India being divided into a number of petty principalities in that century, a condition reflected in the Raghuvamśa. But similar conditions also prevailed in the first century B.C. when after the disintegration of the Maurya Empire and the subsequent collapse of the Śūngas,

since very early times. Only the "house" corresponding to the present "Balance" had no *special name*: the "Scorpion" was extended across the seventh and eighth divisions. "Libra" ('Balance') was not of Greek invention. Ptolemy, who himself chiefly used the 'Claws' (χῆλαι—part of the 'Scorpion'), speaks of it as a distinctly Chaldean sign; and it occurs as an extra-zodiacal asterism in the Chinese sphere" (Encyclopædia Britannica, 11th ed., vol. xxviii, p. 994—see the whole article on "Zodiac"). There were 12 divisions but only 11 symbols; Geminus and Varro only introduced a *name* for the seventh *rāśi*. I beg to take exception to another statement of Mr. Sasthikar. He ascribes Amarasimha, the famous lexicographer, to the 6th century A.D. "as he follows Varāha and not Āryabhaṭṭa in equating the *manvantara* with 71 instead of 72 *mahāyugas*" (I. H. Q., I, p. 310). But Amara seems to have really followed the Manu Smṛti (I. 79), which was certainly written several centuries before the times of Āryabhaṭṭa and Varāhamihira.

¹ See Keith in J.R.A.S., 1909, pp. 433-4.

² Buhler, Kielhorn, Macdonell, Keith, Mr. Dhanapati Banerji, and others.

tradition asserts,¹ he lived about the second half of the fourth century.² If Mallinātha's interpretation is accepted, Kālidāsa must be placed in the fourth century and he becomes a contemporary of Samudra-Gupta or his son Candragupta II. This would of course fit in with the theory of most scholars. But is the testimony so sure that we must accept it? Dakṣiṇāvarta-nātha (12th century) and after him Mallinātha (14th century) are the only commentators who speak of this allusion. The earlier commentator Vallabhadeva (10th century) has no inkling of it. There is no other evidence about the rivalry of a poet Nicula with the logician Diṇnāga (or even of the existence of that poet) and such a rivalry is extremely improbable. Then, the plural in "दिङ्नागानाम्" cannot be explained if Diṇnāga is referred to by Kālidāsa as a rival.³ The name of Diṇnāga was a terror in later Hindu philosophical circles and Dakṣiṇāvartanātha and Mallinātha, nurtured under the influence of these schools, naturally think of the writer of the *Pramāṇa-samuccaya* at the sight of the word Diṇnāga. The story about Nicula probably comes from pure imagination, helped by the adjective सरसः, for is not *kāvya* defined as

Calcutta Oriental Conference, p 196, and Rangaswami Saraswati's paper on "Vasubandhu or Subandhu" in *ibid*, pp. 203—213 (also an article in the I. H. Q., Vol. I, pp. 261-4). I have no opinion to hazard about the identity of Vikramāditya of Ayodhyā father of Bālāditya and patron of Vasubandhu mentioned by Buddhist writers (e.g., Paramārtha in his Life of Vasubandhu).

¹ Kern, Manual of Indian Buddhism, p. 129

² See Kerth's Buddhist Philosophy, p 305.

³ Mr. Dhanapati Banerji has proposed a very queer meaning of "दिङ्नागानाम्" viz, "Buddhist savants out on mission to various places." (Q J.M.S., X., p. 78), for which he has not given any authority and, I believe, has none. Mr. Sankara (*Ibid.*, p. 188) has justly criticised him and Mr. Banerji's reply (pp. 365-6) has not improved matters a bit. No historical conclusion can be arrived at by coining meanings of words at will.

nothing ; Mallinātha has simply copied it from his predecessor.¹ Space forbids the answering of other objections.²

I have not tried to prove the existence of a Vikramāditya, king of Ujjayinī, in the first century B.C. for sufficient facts for such a supposition are already present before scholars, some of whom have accepted their implication.³ The

¹ Mr. H. N. Randle of our Philosophy Department draws my attention to an attempt by Dr. F. W. Thomas, in J. R. A. S., 1918, pp. 118-22, to revive the Diānāga theory. Dr. Thomas believes that Me., I. 14 alludes to a work named *Hasta* by Diānāga and he thinks that it is the same as the Muṣṭi-prakarāṇa-śāstra or Hastavāla-prakarāṇa, a short text preserved in Tibetan and Chinese, and ascribed by some authorities to Jina=Diānāga and by others to Āryadeva. It contains six *kārikās* (seven in Tibetan), followed by a commentary. Dr. Thomas has sought to reconcile the difference in tradition about the authorship of the work by assuming that Āryadeva wrote the *kārikās* and Diānāga the *vṛtti*. The Tibetan and Chinese versions have been published by Dr. Thomas and Professor U₁, preceded by a reconstructed Sanskrit text, in *ibid.*, pp. 267-310. But the introductory sentence of the commentary (p. 278) makes it clear that it is a *svopajñā-vṛtti* and diversity of authorship for the *kārikās* and the *vṛtti* is therefore an unjustifiable assumption. Then Diānāga's claim to have any connexion with the work is not very strong. The Tibetan authorities are unanimous in naming Āryadeva and Chinese tradition is not really agreed, as Dr. Thomas himself admits (p. 271), in making Diānāga the author. That Kālidāsa refers to a work named *Hasta* is not asserted by Mallinātha and is difficult to understand. Nor do I see how Dr. Thomas finds support for Kālidāsa's alleged reference to Diānāga's *sthūla-hastā*=*valepa* in verse 5 of the Hastavāla (p. 119), for there is no mention of *sthūlatva* there ; we have instead *sūkṣma-buddhi*. He himself reconstructs the verse as " सर्वज्ञादितं येन विज्ञते सूक्ष्मबुद्धिना । त्वज्ज्ञेयं बुद्धिनाम् सुदुस्साहस्यं यथा ॥ " (p. 285).

² Some reference to the nature of the relation between Kālidāsa and the Padma Purāṇa may be demanded of me. My friend Professor Haradatta Sarmā has tried to show in his recent "Padma-purāṇa and Kālidāsa, Calcutta, 1925" that Kālidāsa is indebted to the Purāṇa for his variations in the Raghuvamśa and Śakuntalā stories and for many verbal suggestions. Professor Dr. Winternitz writes in the Foreword that he accepts his pupil's conclusions. But careful study of the text published by my friend and of his discussions on it failed to convince me. The view that Kālidāsa has drawn on the Padma Purāṇa is generally prevalent among orthodox scholars and naturally so. But anyone who takes the trouble of reading the text of the Purāṇa published by my friend with an open mind will be convinced that Professor Macdonell and other modern scholars are justified in placing the Padma Purāṇa after Kālidāsa.

³ See the two extracts from the C.H.I., quoted above.

genuineness of the *Saptasatī* work of Hāli Śītavāhana and its reference to (this?) Vikramāditya's liberality (V 61), though doubted in certain quarters, also seems in no need of fresh proof if we are not concerned with the personality of the founder of the Śambat era. Let historians decide whether Azes I or Gautamīputra Śītakarma¹ or any other individual founded it. What I have sought to prove is the existence of our poet Kālidāsa in the time of Vikramāditya of Ujjayini, avenger of Gardabhalla's overthrow. I have shown that Āśvaghoṣa knew and used two of the poems of Kālidāsa. Had Kālidāsa been the borrower, his debts would have been found most in his first poem, the *Rūsamhāra* but I have not discovered any single resemblance between that poem and any passage or passages in the *Śaundarananda* or the *Buddhicarita*. The reason for Āśvaghoṣa's non-use of this lyric is not far to seek, the work is not of great merit and would then hardly pass beyond the limits of

¹ Mr Harit Kishana Deb in the *Zeitschrift für Indologie und Iranistik*, 1922 pp 240-292, but I am not convinced by his arguments. He has made this Śītavāhana prince live in the first century B C and he has identified him with the Vikrama of tradition. Nor am I sure about Sir John Marshall's theory. [Is there any connexion between Azes and Kālidāsa'sāja, justifying the assumption of a matrimonial alliance between the houses of southern Ujjayini (or say of Pratihāna) and of northern Takṣaśīla? Or if there is any reference to Vikramāditya in the title of the *Vikramorvaśīya* could the contemporary counterpart of the *aparis* Urvaśī possibly be a Saka princess? Vikramāditya could thus have come to the throne through the help of, among others, another Saka chief—*सकस्य राजपुत्रस्य*? The era could thus have been jointly founded by Azes and Vikramāditya. The previous Saka satraps of Taxila probably belonged to a rival house (so asserts Smith in *I. H. I.*, p 213 but doubts Rapson in *C. H. I.* I p 368). However these suggestions are not very seriously meant and I disown competence to decide the question.] There is of course no inherent improbability in the assumption that the era was founded by Azes and made current in Avanti by the Saka overthrowers of Gardabhalla (sometime after 58 B. C.?) and that when the Sakas were driven out by Vikramāditya, the national feeling of the people caused the alteration of the name with which the era was originally associated into that of the liberator of Ujjayini. Vikramāditya would then have come to the throne about 50 B. C. or later. I do not suppose that the Jaina legend about Kālika and Gardabhalla is to be accepted in block.

Kālidāsa's native province. It has come down to us only on account of its association with the great name of Kālidāsa.¹ The Meghadūta too has not been used much by Aśvaghoṣa; this poem, though a work of great merit, is also less known generally than the epics Kumārasambhava and the Raghnavaṃśa. The Buddhist writer therefore chose such works of the poet as were most popular (or as I might say, "people were mad after") and tried to improve on them in his own way.² A somewhat similar story is told by the Śiśupālavadha of Māgha, a conscious effort at excelling the Kirātārjunīya of Bhāravi. Māgha has only written a more artificial poem and his lack of originality and inartistic hyperboles make one doubt if we have an improvement here.³ Aśvaghoṣa with a better gift but no poet's training has escaped the same sorry fate; but that his poems are no improvements on Kālidāsa's requires no proving. I have already spoken

¹ I have thrown out the suggestion that Kālidāsa left the Kumārasambhava incomplete and he did not publish it himself, though he wrote and published other works after it; its preservation must be due to Kālidāsa's popularity. [Besides Ku., VII, 56—69 reproduced *mutatis mutandis* in Ra., VII, 5—16, we have another long passage in the second canto of Kumāra, the *stuti* of Brahmā by the gods and his reply, repeated with many verbal agreements in Ra., X. *Ajavilāpa* is also a parallel to *Rativilāpa* and the nineteenth canto of Ra., to the last in Ku. that left Kālidāsa's pen. All this shows that (1) Kālidāsa was giving publicity to some of the nice passages in an unpublished (or suppressed?) work and (2) that he was repeating his own words and not those of another writer.] As fire cannot lie hidden under the cover of linen, the Kumārasambhava could not long remain in obscurity and reached even distant Śāketa in less than two centuries, a fate that was denied to the Rūsasambhava, whose chief recommendation in our eyes is the dawn of Kālidāsa's poetical powers that it reveals.

² But probably in trying to improve on Kālidāsa, he imbibed so much of this poet's devotion to beauty that he himself represented Upagupta as longing for a beautiful vision of Buddha. See the story of Upagupta and Māra of the Sūtrālaṅkāra (pp. 263-73), preserved in the Divyāvadāna (particularly pp. 361-2). The professed philosopher turned to poetry to get popular hearing but ended by building up a synthesis of philosophy and poetry, of reason and sentiment, in that charming form of Buddhism, the Mahāyāna, whose precursor Aśvaghoṣa certainly was.

³ My strictures on Māgha's poem must not be taken to imply a refusal to admit any good points in that work.

of the influence of Darwin's theory on contemporary scientific thought. But we should not make a fetish of it, fetishism is least in accord with science. Evolution is a truth but decay is not an illusion. And then human thought and its products cannot be brought under mechanically regular laws of nature. If Asvaghosa is to be believed as Kālidāsa's predecessor the latter's borrowing should be *proved* and not *assumed*. It is possible that I have misunderstood the indications of the resemblances recorded above but the importance of the question demands that scholars should try to set me right. This kindness I crave of my readers for my own aim has throughout been to know the truth. I want to be convinced that scholars are not decaying in favour of the Gupta period or a later date under the hypnotic influence of repeated assertions to this effect by a host of writers Indian and European an influence which has often eluded me its votary like the repeated statements (may I hope?) that induced a simple Brahmin to look upon a sacrificial goat as a vile dog.

I therefore conclude with the prayer

तमसा मा ज्योतिर्गमय

Besides the gentlemen named above who have had me under obligation by listening to my arguments or reading this paper in proof or in any other way I must mention here my revered teachers MM Dr Jhā and Pt. G. Kavarij and my friends Prof. Dr. S. K. Chatterji, Dr. H. Ray Chaudhuri, Dr. Pashupati Nath Shāstrī, Pt. Bātuknāth Sharmā I of G. Gupta, Prof. J. De Pt. Iswar Prasad and Mr. R. M. Shāstrī. I offer my thanks to all of them. Nor must I omit to thank the Manager of the Indian Press and his staff who have conformed to my wishes at great sacrifice.

P. S.—It will be seen above that I have not used the simplicity of Kālidāsa's style as an argument for it is possible for a later writer to write in a simple style. But the fewer rhetorical ornamentations used by the poet might be used as a corroborative evidence. Kālidāsa's vocabulary and metre will give us much help but they require separate treatment.

The new Ayodhyā inscription of Dhana (-deva) the sixth (brother) of Pūṣyamitra and ruler of North Kosala, shows Śaṅga rule there and may be used as a match for the argument (pp. 152-3) laid on Gupta connexion. Ayodhyā ज्योतिर्गमय ॥

one of the most prized objects in ancient times,¹ when needs of onward advance and consequent strifes with other people added a cause to the pious desire for a son, was always prayed for of the gods, and marriage was made binding upon all who would not shut themselves from the blessings of progeny in this life and in untortured peace in the life after death. A much greater strictness has been observed with regard to marriage of the females and a girl who remains unmarried up to a certain age brings criticism both of the society and the religious law upon herself as well as upon her family. To quote,—

"A Hindu male must marry and beget children—sons, if you please—to perform his funeral rites, lest his spirit wander uneasily in the waste places of the earth. The very name of son, 'Putra,' means one who saves his father's soul from the hell called 'Putā.' A Hindu maiden unmarried at puberty is a source of social obloquy to her family and damnation to her ancestors."

In fact, marriage is part of a man's religion, his solemn duty, and must in no case be neglected. "According to the Laws of Manu," says Monier Williams in his *Indian Wisdom*, "Marriage is the twelfth *Samskāra* and as such a religious duty incumbent upon all." The entire ritual of marriage, and most of the changing customs too, is now-a-days evidenced, have that essentially religious atmosphere about them, which excluded, marriage would not remain marriage at all.

Our ancient forefathers, the *Rishis* of the hoary Vedic tunes, passing from the stage of mere devotional prayer

¹ See Vedic Index of Names and Subjects p 486 — But the main object of a woman's marriage was the production of children this being repeatedly asserted in the *Rigveda* and later. The desire for offspring took the form of a wish for a son to perform the necessary funeral rites for the father and to continue his line. Cf also p 336 — Reference is frequently made to the desire for a son. The authors support their remarks by referring to a number of passages in the Vedic literature.

² P. K. Watta! *The Population Problem in India*, p. 3

and worship of gods, when gods and their fear and love were their sole absorption, began gradually to constitute a system, a ritual, of worship, and later on a ritual of everything. And a time came afterwards when this ritual began to play the chief part but, nevertheless, pervaded with the spirit of worship, in fact the spirit of religion, through and through. During the *grihya* period—the period of the composition of the *Grihya Sūtras*—there existed a ritual about everything that was held important; and this was in order of the degree of importance of the particular rite. Marriage being one of the most important functions in life, its ritual too was very complex. But besides the ritual, there was a number of other limitations too which governed marriage as strictly as the ritual itself; and all these limitations and ritual have come down to us in a little or more strict form. “Marriage is, therefore,” in the words of Mr. R. W. Frazer, “the most ancient, sacred and inviolable of all Hindu institutions and its due performance the most complicated of all religious acts....To remodel the institution of marriage is to reorganise the whole constitution of Indian society and to create, so to speak, an entirely new social atmosphere.”¹ But before entering direct into the treatment of our subject we may have a brief notion of what the *Grihya Sūtras* are and understand the point of view with which we have to discuss marriage in the *grihya* times

*Grihya Sūtras*² describe the various rites and ceremonies that a householder has to undergo and undertake from his

¹ Indian Thought Past and Present, pp. 271-72.

² There are different *Grihya Sūtras* attaching themselves to the different schools of the various Vedic *Saṃhitās*. Of those that have yet come to light belong to—

the *Rigveda*—the *Śaṅkhāyana* and the *Āśvalāyana Grihya Sūtras* ;
the *Sāmaveda*—the *Gobhila*, *Khādīra* and *Jaimini Grihya Sūtras* ;
White *Yajurveda*—the *Pāraskara Grihya Sūtra* ; Black *Yajurveda*,—the *Bodhāyana*, *Hiraṇyakeśi* and *Āpastamba Grihya Sūtras* ;
the *Atharvaveda*—the *Kauśika Sūtra*.

birth down to the time of his death. Probably before the composition of Grihya Sūtras the *grihya* life and duties were not so complicated and accompanied with all that paraphernalia of charms and chants and ritual and various other complexities which became their guiding elements later on. Probably also, as Oldenberg thinks, there are no direct traces of *grihya* ceremonies in the early Vedic literature and some of them are, beyond doubt, "contemporaneous with, or even earlier than, the most ancient hymns of the R̥gveda".¹ The time of the Grihya Sūtras, coupled with that of the preceding Śrauta Sūtras, extends over a sufficiently long period² to allow a thorough development of anything.³ The ceremony of marriage itself was divided into no less than five half-dozens of important items, the various details resultant from or preceding to it excluded. In a case like this the object of a critical study will, as is necessary, be to find out by comparison of the different Grihya sūtras what items were common to all and thus likely to be older and what those of which we find mention only in some and which therefore were either the fruits of later developments of the *grihya* times or had then become obsolete. Again a comparison of some of the customs prevalent now-a-days will show us which of the older practices have descended to us in their original forms and which have left only meagre traces of themselves or have now disappeared.

¹ Introduction to the Grihya Sūtras S B L. Vol. XXX, p. ix.

² See Hopkins, Religions of India, p. 7.—The Brahmanic age in turn ends, as we opine about 500 B.C. overlapping the Sūtra period as well as that of the first Upanishads. The former class of writings (after 500 B.C. one may talk of writings) is represented by dates that reach from Circa 600—500 B.C. nearly to our era.

See Hopkins, Religions of India p. 21.—It is sufficient to understand that according to the house-ritual (Grihya sūtra) and the law ritual (Dharma Sūtra and Dharma Śāstra) for every change in life there was an appropriate ceremony or a religious observance.

Of the kinds of marriage which were being recognised then, we find distinct mention only in the *Āśvalāyana Gṛihya Sūtra* of the *Rigveda*. They are eight in number, *viz.*, *Brāhma*, *Daiva*, *Prājāpatya*, *Ārsha*, *Gāndharva*, *Āsura*, *Paśācha* and *Rākshasa*.¹ But undoubtedly the most acceptable and honoured forms of marriage were the first two,² and from the definition given of the *Brāhma Vivāha*,³ it is evident that all the *Gṛihya Sūtras* agree in prescribing rules for this one only, which with slight variations could have been adopted for the following three also. There are no grounds to believe that the *Āśvalāyana Gṛihya Sūtra* is the latest⁴; but, even if there were, the silence of the earlier ones in this respect would not lead us to the conclusion that these various forms were developments of the later *grihya* age. The numerous references to all these kinds of marriage in the early Vedic literature⁵ show that they were prevalent even in the most early times. Some of the later *Dharmaśāstras* also describe these various forms and as late as the time of most *Purāṇas*, some of the lower kinds also, *e.g.*, the *Gāndharva*, were often resorted to. But the tendency seems to have been ever on the decline for these lower kinds. *Kauśika Sūtra*, a late book of the *Sūtra Age*,⁶ after describing marriage rites, however, mentions three names, but omits others.⁷

¹ *Ās.*, I, 6.

² According to the commentator *Gargya Nārāyaṇa*, the first four of these are respectable in order, the latter four sinful. Of these also the first two only are meant for *Brāhmaṇas*, *cf.* तत्र पूर्वे ब्राह्मणस्य । इतरयोः प्रतिग्रहाभावात् । आर्त्तिक्यभावाच्च । गार्ग्यः बन्धिवस्य पुराणे दृष्टत्वात् । राजमग्न्य तस्यैव युद्धयोगात् । आसुरस्तु वैश्यस्य धनसंयोगात् । इतरे त्रयोऽनियताः ।

³ ब्रह्मस्य कन्यायुदकपर्वो दद्यादेव ब्राह्म — *Āś.*, I, 6, 1.

⁴ According to *Monier Williams*, *Āśvalāyana's* "collection of rules (*sūtras*) was probably composed more than 2500 years ago" — *Brahmanism and Hinduism*, p. 385.

⁵ See *Hopkins, J.A.O.S.*, XIII, pp. 361-62.

⁶ See *Bloomfield's Introduction to Kauśika Sūtra*, p. xxxi : "...I shall be content if these remarks have made it clear that the *sūtra* ascribed to *Kauśika* is a work dating from the later *sūtra* period."

⁷ The description of marriage here given is almost the same as of the other *Grihya Sūtras*. In the end we find—एष विवाहः

The one form of marriage that has come down to us, with its local differences of course, is the *Brāhma*. This fact also supports to some extent the inference that the lower kinds of marriage, at one time in vogue, became more and more unpopular as people grew in their refined sense and more sensitive morality. Mr Grih's remark about marriage being as a rule by purchase now-a-days¹ does not seem to be universally true. Leaving the *Kānyakubya* Brāhmanas and certain Kīyastha families, marriage by purchase is little seen in Northern India. In Bengal, however, it is most in practice and the price is almost universally paid for the bridegroom. The form of purchase is usually the settlement of a big dowry or a sum of money to be paid by the bride's father on the occasion of marriage, in other words, the bridegroom has to be purchased, or rather, bribed, for the bride. In olden times purchase was generally of the bride. The suitor had to present rich gifts to his future father-in-law, whereupon the marriage was celebrated in traditional form in the presence of both families and their friends in the house of the bride's parents.²

The *Āsura* form of marriage was always looked down upon as unworthy,³ but the ceremony attendant upon it should have been of the usual kind. It is to be doubted if

विवाहः । अक्षरावन्निर्वाहः । कायः प्रजापतेः प्रजापतेः । (X 79.31-33) Bloomfield quotes from another Ms. wherein the last sūtra is read as कायः प्रजापतेः प्रजापतेः । Probably *sturya* was an infrequent name of the *Brāhma* *Vivaha* while *Brāhmyā* was a name for the same kind of marriage slightly different from the *Brāhma* of other Grihya Sūtra in the ritual or worship part of it (cf. अक्षरावन्निर्वाहः). On *Prājāpatya* Kesava the commentator has to say—कायः प्रजापतेः एव प्रजापतेः विवाहे लुप्तः एव कायः ।

¹ Census of India 1911 Vol. 1 p 257

² See Adolf Kaegi The Rigveda p 15

³ Vedic Index by Macdonell and Keith p 482, refers to the use of *ājāmātra* in the Rigveda which meant a son in law who not being in other respects altogether suitable had as indicated by Pischel, to buy his bride at a heavy cost. The *ājāmātra* was in fact the *ājāmātra* the ignoble son in law of Rigveda, VIII 2 20 Bodhāyana, quoting the opinion of others says in his *Smṛiti* that a woman purchased for money is not a wife and she cannot assist at sacrifices according to Kṛ̥ yapa she is a slave (I, II 21 2)

Gāndharva, *Paiśācha* and *Rākshasa* marriages had any real ceremony at all,—in any case there could not have been any ceremony at the bride's father's. Now-a-days, among some uneducated and hilly tribes, where traces of marriage by capture (*i.e.*, *Rākshasa* marriage) may be found, some sort of ceremony does seem to take place. In a few cases, a mimic fight takes place and ordinarily it is the bride whose capture is simulated, although among the matriarchal Garos it is of the man too. In Baroda and Kashmir a Rajput often sends his sword to represent him in marriage. In Tinnevely the Marava zamindars may send their stick.¹ Here the mimicry itself appears to have become a part of the ceremony.

If by marriage we also understand that behaviour and attitude of action which tend to bring about relations akin to those of husband and wife, it is occasion here to consider what are generally called widow-marriage, *niyoga*, polygamy, etc,—practices which presuppose marital relations, but are not regarded as such and are looked upon with discouragement by the society. In the earlier Vedic literature, references to such practices are usually found,² but *Grihya Sūtras*, being works purely on *Samskāras* are silent about them. Yet inference can be drawn from such passages as कुमार्याः पाणिङ्गुल्लीयात् (Pār., I, 4, 5), नग्निका³ तु श्रेष्ठा (G., III, 4, 6), पिण्डानभिमन्त्र्य कुमारीं ब्रूयात् (Ā., I, 5, 5), and a long list of various kinds of girls to be excepted from selection, as given by Āpas-tamba, that illicit relations often existed in the society. People had become very cautious in their selection of the bride and took every precaution against marrying an unchaste or wedded girl. This also does away with the question of widow-marriage, and Mr. Gait is very correct when he says that "the

¹ See Census of India, 1911, Vol. I, pp. 257, 261.

² See Vedic Index of Names and Subjects, pp. 477-78.

³ "According to the *Grihya-samgraha* (II, 17, 18), a 'naked' girl is one who has not yet the monthly period, or whose breast is not yet developed."—Oldenberg, S.B.E., Vol. XXX, p. 82, footnote 6,

logical outcome of the theory that marriage is a religious sacrament is that a Hindu widow cannot take a second husband"¹ Āpastamba discards even a *dattā* girl, one who has already been given in promise to some other person, as unfit for marriage.² Leaving some of those who have become more modernised through contact with the Western ideas and the Āryasamājist class of people, we find that, even now-a-days, widow-marriage is associated with a not very favourable sentiment of the people. Among some low classes scattered here and there widow-marriage exists in one form or other which seems to have developed from the *niyoga* practice of olden times. Mr Gut gives an account of some of the classes which allow widow-marriage. His remarks —

"In Bengal only the lowest castes allow widows to remarry, but in many parts the prohibition is far less general. In the Punjab it applies only to the castes of twice-born status. Widow-marriage is exceedingly common in Orissa, and in Baroda it is said that there are even certain low classes of Brāhmanas who recognise the practice, while in the Punjab hills and Marwar certain Rajputs do so. Where widow-marriage is allowed, the general rule in most parts of India is that the deceased husband's younger brother may, if he so wishes, take the widow as his wife, and she may marry no one else without his consent, sometimes, indeed, she must first obtain from him a formal deed of separation. Marriage with the deceased husband's elder brother is generally forbidden, but it is allowed by the Kanets in the Punjab, by the Banjāras of the Central Provinces and by the Gandhis and Koppali Velamas of Madras. The Muduvans and Udayas of the same Presidency forbid marriage with either brother, and regard the son of the

¹ Census of India, 1911 Vol. I p 216

² "गुरुं वदन्ती विद्यायां वसेत् परिव्रजेत् ; इत्थं गुरुं दत्तोक्तवचना, वदन्ता विदता विदता गुरुं वदन्ति वादवन्ति वाता वाता विदन् वदन्ता वदन्ताः । — Āp., I 3 11 12.

deceased husband's maternal aunt as having the best claim to her....."¹

Nobody now advocates the practice of *niyoga* and in those days too when it was exercised it was not held in high esteem—at least not regarded as a matrimonial duty of man or woman, except so far as the continuation of the line was concerned. The *Gṛihya Sūtras* make no reference, whatsoever, to it² while describing *garbhādhāna*. The *Āśvalāyana Sūtra*, however, in its treatment of the funeral ceremony, prescribes the lying down of the wife to the north of the deceased husband, and her younger brother-in-law, now to be a substitute of her husband (*patisthānīyo devarah*), makes her get up.³

¹ Census of India, 1911, Vol I, p 216.

² The *Dharma Śāstras* mention it. From them, too, it appears that women were given no license for the *niyoga* practice. According to *Bodhayana*, a widow had to avoid for one year the use of honey, meat, salt, etc., and was required to sleep on the ground. After that she might, with the permission of her elders, bear a son to her brother-in-law, in case she had already no son.—II, 2,4,7-9.

³ उत्तरतः पत्नी । धर्मश्च वृत्तिवार । तत्पुत्र्यापयेद्वैश्यः पत्नित्वाग्नेदिगम्तेदाग्नें अष्टाश्वमेदिश्वनायंभि-
द्योतकोक्तम्—Ā., IV, 2, 16-18. The expression *patisthānīya*, substitute of the husband, here, is really significant and raises a difficulty. If the consideration was of supporting the widow, the word enjoys only a side-application of the meaning and can qualify all the three persons named. The other consideration could be in which the word would have its full application and the substitute would in cases of need fulfil all the responsibilities of a husband. In the former explanation, reason will have to be sought why the son, or the father-in-law, or the elder brother-in-law have been omitted—persons upon whose support the widow could count upon with better reason and hope. On the other hand the *devarah* might possibly only have been a child, the *antevāsī* himself a dependent boy and similarly also, the old servant. In case of the alternative explanation of the word, whereby we may understand a reference to the *niyoga* practice, the word can be taken to qualify *devarah* only and not also the other too. The *antevāsī*'s relations were too sacred to allow *niyoga* with him and the *jaraddāsa* was too old, and perhaps indignified also, for it. But these two could probably touch the woman—although it is not clear whether touching was necessary to raise her or they merely addressed her to get up—and were to officiate either in the absence of a younger brother-in-law or when the deceased left children. But this again remains a question why in this case also, the son or the father-in-law has not been mentioned instead of, or besides, the younger brother-in-law or the old servant. In any case, the *devarah* was to be *patisthānīya*

Coming to polygamy one finds that it was allowed by the Grihya Sūtra writers with certain limitations. Pārīkari allows three wives for a Brāhmana, one from each caste, two for a Kshatriya and one for a Vasya. These all could have an additional wife also from the Sūdra class, but recitation of mantras was prohibited in marriage with a Śūdrā wife.¹ Other Grihya Sūtras are not frank on this point,² but numerous illustrations from the literature that went before and came after the Grihya Sūtras show that polygamy was in vogue. Usually, it should have been the well-to-dos and the reigning class that kept more wives than one." The king regularly has four wives attributed to him, the Mahis, the Parivrkti, the Vavātā, and the Pālāgati.³ Yet it seems that this system was not held in very high esteem and gradually died out in course of time—in the R̥gveda period itself, Zimmer thinks, it was dying out—and that the wife first wedded was alone a wife in the true sense. "This view is supported by the fact emphasized by Delhruck, that in the sacrifice the Patni is usually mentioned in the singular"⁴

Another case in which polygamy could have existed was the one in which the first wife did not bear any sons. The

only, as is to be inferred when the widow was left childless and this inference is supported from numerous references to the fact in the previous and later literature. To quote Macdonell and Keith from their Vedic Index, p. 477 the custom of *niyoga* was probably not followed except in cases where no son was already born. This custom was hardly remarriage in the strict sense since the brother might—so far as appears—be already married himself.

¹ Pār. 1.4.8.11

Bodhayana defining the various kinds of sons writes—*अपत्यं* *अपत्यं* *अपत्यं* *अपत्यं* (I 7, 1). This may either imply that a Brāhmana had wives from other castes as well or it may be taken to leave out illegal sons born of a Brāhmana. But the latter inference is less likely for a Brāhmana could have illegal connections with a Brāhmanī too and from the description which follows the above quotation (I 7.2—21) and the connection in which the whole thing is treated of we cannot derive the conclusion that an illicit son of a Brāhmana could also be called *pūta*. The Hiraṇyakeśi Grihya Sūtra prescribes that the wife should be from the same caste (I 17, 2).

² Vedic Index of Names and Subjects pp. 478-79

existence of such a case is not inferable from the Grihya Sūtras, but having a son being necessary, there can be little doubt about its existence. Even now some husbands have more wives than one—have them on a mere excuse of the slightest fault on the part of the first wife. Grihya Sūtras do not also throw any light on the question whether, in such a case, the second wife must have been from the husband's caste only or she could be from any other also.

In the modern day, polygamy among the civilised and educated people is almost a nullity. Sometimes here and there, we still have polygamous customs, *e.g.*, amongst the Kunniwans and Kaikolans of Madras. On the other hand, among certain castes "there is a certain amount of compulsory polygamy owing to the practice whereby certain castes expect a man to marry his elder brother's widow. The Garos expect him in certain cases to marry his widowed mother-in-law. The Namputri Brahmans are polygamous, as the eldest son alone is allowed to marry, and unless he took several wives, many of the girls would perforce remain unwed."¹

Courtship in the R̥gvedic age was sometimes sought and parents were often anxious to see that the acquaintance between their daughters and the youths in view came out successful. Such acquaintances were generally formed on some festive occasions, and in case the friendship developed, permission for marriage was to be sought from the father or some other guardian of the girl.² But this custom too was probably dying out in later age. The Grihya Sūtras are entirely silent about it. Only in the Āpastamba we find, after a description of girls that are to be left out, the passage यस्यां मनश्चक्षुषो निर्वधस्तस्यामृद्धिनतरदाद्वियेतेत्येके.³

¹ See Census of India, 1911, Vol. I, p. 246

² See Adolf Kaegi, The R̥gveda, p. 15.

³ Āp., I, 3, 21. Commenting on this Sudarśanārya says—
अथ मनश्चक्षुषो निर्वधस्त्यामृद्धिनतरदाद्वियेतेत्येके
कारण, न तु स्वापादयो दीपा इति । उभयोरपि अथार्थस्त्यामृद्धिना निषेधनाद्वियेतेति, 'सुवर्णापूर्वास्तविहितान्'
(आप. प. २-१३-१) 'अनमानादयोग्यता, पञ्चनास्तस्यामृद्धिर्धनं' इत्यादिवचनजातात् । It means

But *manonibandha* cannot be taken very conclusively to point to the existence of a previous intimacy between a girl and a boy. Or, generally, the common injunctions should have been followed while in exceptional cases, when a previous *manonibandha* existed, the latter should have worked decision.

The peculiar moral and semi religious prejudices of the Hindu society never made it possible for the system of courtship to grow. The innumerable limitations that governed marriage and the constantly narrowing of circles from which a bride or bridegroom could be selected could not breed an atmosphere healthy for the growth of pre-marital communism and friendship. In fact, the real matrimonial friendship was supposed to be brought about after such solemn parts of the ceremony as the *Saptapadi*, when the bridegroom had to recite—सद्यस्त्वस्रपदा ध्रूम सख्य ते गमय सख्यास्ते मा येष सख्याम्हे या दोष्ट ।¹

The modern Hindu society does not approve of the ways in which bachelors in the Western countries select their own wives and pledge their matrimony to maids. However, with many aboriginal tribes in India it is the custom to make children sleep away from their parents. Separate dormitories are kept for boys and girls, and girls usually creep away to those of the boys. In case pregnancy occurs, they expect that the putative father should take the girl as his wife. A Gujar girl who goes astray with a man of another caste is excommunicated, but, in case the lover is a Gujar, she is forgiven on her parents giving a feast.²

In the Grihya Sūtra times it was the custom to send, first, 'woocers' to the house of the bride. The work of woocers was

that in the fact of such prohibitions as explained by दाम् etc (see footnote 2 p 178) the attachment of mind and eye had no standing and दाम् should be taken in refer to such rulings of secondary importance as दाम्बन्धनस्य विना दाम् दत्तं विवाहमेव । (Ap I 3 14)

¹ Both I 1 28 Hir I 21 2

² See Census of India 1911, Vol I p 243.

to confirm the contract of marriage.¹ But the custom of sending 'woosers' may not have been perhaps universal. Some Grihya Sūtras omit the mention of them and their work altogether. Besides, sometimes, the bridegroom himself may have first seen the bride and after an estimation of hers decided about marriage. This may have been the case sometimes when, in order to know the particular characteristics possessed by a girl, she was made to choose one of the several clods of earth presented to her.² The girl chose one of them and this gave the final word of decision. But this in itself is not conclusive as to the exact personality who presented the clods. The presentation could as well have been made by some one else—possibly the bridegroom's friends, the 'woosers'—on behalf of the bridegroom.

Greatest care was observed in selecting a bride. The numerous details expected to be present in a suitable bride were sometimes so confusing and difficult to be detected that recourse was often had to means hardly convincing. All the characteristics were judged by one single device, a self-makebelieve, viz., the presenting to the bride of a certain number—usually eight—of clods of earth or seeds of grain from different places, out

¹ Cf. शुग्मान् ब्राह्मणान् वरान् प्रहिणोति । But यदि दक्षिणनिः सः दत्तस्येन्तत्र वरान् प्रहिणुयात्—Bodh., I, 1, 13-16.

युवं भग्निति संभलं सानुचारं प्रहिणोति । ब्रह्मण्यत इति ब्रह्मणः । तद्वृत्ताच्छक्राना निगि कुनारीकुला-
द्वयलीकान्यादीष्य ।—Kauśika, X, 75, 8-10. Upon this the *Daśakarmāṇi Brahmadevaktani* says—यद्वर्चनं संपुटनमिन्नच्य सानुचारं वरं प्रतिप्रेषयति. . यद्वर्चनं ब्रह्मणः
प्रेषयति कुनारीसमीपे वरस्य गुणान् कथयति ।

सुहृदः सनपेतात्मन्वयो वरान् प्रहिणुयात् ।—Āp., II, 4, 1. But curiously the commentator writes in this connection एतत्तुवरप्रेषणाद्वानुचारप्रेषणेव, नाभ्येव अर्थलोपात् । None of the Grihya Sūtra texts, however, make any distinction of this kind. If there was any recognition of the sending of the 'woosers,' it could have been for all the recognised forms as well. There is nothing in the Sūtras to show that *arthālopa* was a necessary condition for sending 'woosers.' By *arthālopa* we understand the paying of a price for the bride. In the *ārsha* marriage the bridegroom had to give a bull and a cow to the girl's father.

² Ā., I, 5, 5-6 ; G., II, 1, 4-9 ; Āp., I, 3, 14-17.

of which she was asked to select one. The clod made of earth from a particular spot indicated a particular characteristic of the girl and settled if she would make an acceptable bride. Sometimes, the limitations were so great as even to discard girls having a particular kind of name.¹ In general, she should have been of proportionate limbs, smooth hair, with two curls to the right at her neck—such a one being expected to give birth to six sons²—of a good and respectable family, possessing intelligence, beauty and moral conduct and free from disease.³ Then she should not have been already given to another, or guarded or concealed by her relations, or of crooked eyes, or hunch-backed, or one whose lustre was lost, and so on.⁴ Similarly the bridegroom was also sometimes expected to fulfil certain requisite conditions, but probably the people were not very strict about his qualities. Only Āśvalāyana speaks in this connection and he too in a very suppressed manner.⁵

Besides, there were other limitations pertaining to the family of the girl. First of all an examination of the girl's family, from the father's side as well as from that of her mother, was necessary.⁶ According to Gargya Nārāyana,

¹ (१) अथवाता भवितव्या इत्यप्यत्राह बहिरा । एतान् एतन्महोदयान् बहिरे बहिरादेन ।—
 Ap 1 3 12 13 This suggests also that parents should have taken care not to name their daughters after rivers or in words ending in or beginning with ra or la. This restriction does not seem to be much observed now a days, when such names as Saraswati, Kanwal or Lalitā are not uncommon.

² S 1 5 6-10

³ Ā 1 7 3.

⁴ See footnote 2, p. 178. Oldenberg admits the difficulty of translating this passage and thinks that 'Most expressions in this Sūtra are quite doubtful.' Cf. the commentary—
 दामं कथमपि वाच्यं प्रतिष्ठता उद्भवये
 वा प्रतिष्ठतिता । पुत्रा उद्भवये कथमुक्तिविपरीता प्रदायकत्वेनावा वा दीयेत्यभिप्रेक्ष्यता । इतिता
 विद्वान्मो कथमेवाता विद्वन्महिर्वा । अथवा प्रपता अथवादेव इति प्रतिष्ठता वा वस्यता
 अथवाति वस्यता । इतिता अथवाति वस्यतालोपा वा, उद्भवये etc.

⁵ इतिवते कथा प्रपद्यते ।—Āś. 1 5 2

Āś., 1 5, 1

the commentator of Āśvalāyana, her parents should have been free from the 'great sins' and such diseases as epilepsy, etc. Gargya Nārāyaṇa quotes that that family is considered flawless in which ten descents on the father's side and ten on the mother's side have been distinguishing themselves by learning, penance and good deeds. According to Gobhila the girl should not be from the same exogamous group (*gotra*),¹ she should not be a *sapinda*-relation² of his mother and should be a *nagnikā*. Khādīra supports Gobhila. Hiranyakeśi narrows these limits further by adding that she should belong to the same country and should be of the same caste.³

More than any other practices and considerations relating to marriage, the ordinances about *gotra* and *sapinda* relationship have come down to us in an almost unchanged form. Nearly the whole of Northern India believes that a man should not marry in his own exogamous group. Sometimes, as with the Marathas, he may not marry even in the group to which either parent belongs. "In Orissa, intermarriage between members of the same *gotra* is strictly forbidden only in the case of Brahmans. In Bombay, the Anāvālā Brahmans may marry within the *gotra* provided the couple are outside seven degrees of relationship, Audich Brahmans if they have different surnames, and Modh Brahmans if the *pravara* is different. The Sakadvipi Brahmans of Bihar do not regard the *gotra* as constituting any bar on marriage. In Assam, Garhwal and Marwar also, the Brahmans do not all observe

¹ G., III, 4, 4-6. Bodhāyana in his Dharma Sūtra (II, 1, 1, 37) ordains for one who unintentionally marries a woman of the same *gotra* to support her and treat her like his mother.

² According to Gautama, XIV, 13, 'Sapinda-relationship ceases with the fifth or the seventh ancestor. See also Manu, V, 60. Āpastamba Dharma Sūtra (II, 6, 15, 2) prescribes the bathing of an adult in the case of death of a relation within six degrees from his father's or mother's side.

³ I, 6, 17, 2.

the restrictions implied by the *gotra*." In South India *gotra* restrictions are more rare, while, in some cases, the marriage of a certain class of first cousins, or, sometimes even closer alliances, are usually tolerated.¹

The age at which one could marry in the *grihya* times was evidently much advanced and child marriages must have been unknown in the case of males. All the Grihya Sūtras permit marriage only for a *snātaka*, i.e., for one who after initiation, having passed a certain period in the study of Veda, was going to enter upon the duties of a householder.² We do not know if the strict limitations about age were backed by as strict a practice also, but clearly, a departure, in practice at least, must have taken place in the early classical period itself and as late as the time of our literary poets and dramatists it must have secured general recognition.³ The gulf between the old law and the practice of later days is all the wider now when children are married even while they are within the limits of their infancy. In some of the lower communities of Baroda and the C P., sometimes even unborn children are given in wedlock, because of a very curious custom of celebrating all their marriages on a single day once every 9, 10 or 11 years. If, however, when born, they happen to be of the same sex, the ceremony is considered as void.⁴

There have been greater discrepancies in the quota of marriageable age for females as deducible from statements of different periods. Numerous references found in the Vedic

¹ Census of India 1911 Vol I pp 250-51

² The time when one became a *snātaka* was different according to the differences of caste and to the number of Vedas studied. After the initiation which took place generally in the eighth year after birth in the case of a Brāhmana, in the eleventh year in that of a Kshatriya and in the twelfth year in the case of a Vaiśya, the initiated had to undergo a period of studentship of 12, 24 or 36 years according as one two or all the three Vedas were studied. Then took place *Samavartana* after which one could enter home life.

³ The Rāma of Rāmāyana and the Madhava of Bhavabhūti were married at the age of sixteen and fifteen respectively.

⁴ See Census of India, 1911 Vol. I p 258

literature, to unmarried girls who grew old in the house of their parents, show that in the early Vedic time unions usually took place between a fully developed couple.¹ In the *grihya* times the limit of marriageable age for girls had become much more defined; and if there are no direct traces in the *Grihya Sūtras* to show that girls were much developed at the time of marriage, the inference can at least be drawn that they were generally married when on the verge of youth or when they had just stepped into it. A *nagnikā* girl was generally preferred and on the fourth day after the bride was taken to the bridegroom's house, cohabitation took place. There was a strict injunction that during the first three nights after marriage they should observe perfect *brahmacharya*, should sleep on the ground and should not eat pungent or saline food.² Some *Grihya Sūtras* explicitly prescribe the fourth-day intercourse.³ While the rest, from the very fact of their being strict with regard to the first three days' *brahmacharya*, seem to have a tolerant attitude about it. Only the *Pāraskara Sūtra* stands alone in advising cohabitation after the monthly period separately; but, at the same time, he gives freedom about the other days too and also speaks of the usual *brahmacharya* for the three nights, giving also the optional periods to the extent of one year. Then again, we find the self-same authors who give these injunctions, laying down, in another place, such restrictions as that one should not desire intercourse with an *ajātalomnī*.⁴ All this seems so confusing and

¹ See Vedic Index of Names and Subjects, p. 476. The authors allude to various passages in the *Rigveda* and the *Atharvaveda* and to instances of other kinds in which grown-up maidens or youths sought the love of the other.

² Ś., I, 17, 5; Ā., I, 8, 10-11; G., II, 3, 15; Kh., I, 4, 9; J., 20, 6; Bodh., I, 7, 9, etc.; Āp., III, 8, 8; Hir., I, 7, 10; Par., I, 8, 21; K., X, 79.

³ Hir., I, 7, 23, 11—24, 6; G., quoting others, II, 5, 7; Āp., III, 8, 10.

⁴ Cf. *अजातलोम्नी*—G., III, 5, 3; Kh., III, 1, 34. *अजातलोम्नीं विषुनीं पंडाञ्च नेपथ्येदेत्*—Par., II, 7, 9. Gobhila, who, in his *Grihya Sūtra*, considers a *nagnikā* girl as best and enjoins strict observance of *brahmacharya* for three days after marriage, says in his *Smṛti*—

अजातयजनालोम्नी न तया सट् सविरेत् ।

अयम् काकरोष्या दा जाता ता न विवाह्येत् ॥—III, 136.

self conflicting that unless we presume that the girl was *nagnikā* at the time of selection and that some time intervened, as it does now for making preparations, between the selection and the marriage, thus allowing the girl to become *anagnikā* by the latter occasion, we cannot help accusing the *grihya* authors of a gross self-contradiction.

But whatever the compromise be that *grihya* writers and commentators may offer, the fact that girls should have been mature at the time of marriage is further evident by the statement of Jaimini who, in defiance of all other writers, even prescribes on *anagnikā* girl as the one to be selected.¹ Hiranyakeśi, on the other hand, says—'Let him marry a girl who is a *nagnikā* and who has not had sexual intercourse.'² Again, we find that, according to this author, the fourth day's cohabitation is necessary.³ Here, unless we take for granted that *nagnikā* also meant what we know as '*anagnikā*'—a queer paradox, of course—we cannot make the two conditions agree with each other. It would be questioned if a totally opposite meaning came to be attached to the same word in not a very distant period of time. Even to-day we understand by *nagnikā* what we used to understand in the time of Gobhila and his son.⁴ But then, we have also the support of the commentator Matridatta in favour of the paradox. He defines *nagnikā* as a girl just on the eve, or within the precincts, of puberty, one, 'worthy of being without clothes, therefore, fit for cohabitation.'⁵ In addition, again, we have such an authority as the author of *Śaṁskāraśāstram* standing side by side with Matridatta.⁶ And so, in order to see that our *grihyakara*

¹ शास्त्रानुवर्तनां तावत् विच्छेदात् एवम् अथवाऽऽपि अथवाऽपि नानुचितेति वा—20 3

² शास्त्रानुवर्तनां अथवाऽपि नानुचितेति वा—1 6 19 2

³ See footnote 3, p 187

⁴ 'न एवम् नु अथवाऽपि नानुचितेति वा—1 6 19 2' after Puberty, p 31

⁵ 'अथवाऽपि नानुचितेति वा—1 6 19 2' after Puberty, p 31

⁶ Cf p 403—अथवाऽपि नानुचितेति वा—1 6 19 2

is not totally devoid of self-consistence we may have to accept the explanation given by the commentator.

But then, how is the paradox to be explained? Looking to the commentator and at the same time having regard of the generally accepted meaning, we perforce have to ask ourselves if our *grihya* authors were not, sometimes, a bit unscrupulous with regard to their language. Was it not that the basis of difference between the meanings of the two words should have been a very little duration of time—a short-lived transition—which separates the two conditions of girlhood and yet joins them? And then, could not, by a little stretch of interpretation, our *grihya* authors have made both the words serve the same purpose? We have already seen that the attitude of the *grihya* law-givers was to allow cohabitation on the fourth night after marriage and that this could not have been done with an *ajātalomnī*. So, even those authors who mean by *nagnikā* a 'nagnikā' had not probably in mind a *nagnikā* of a very small age, but one who swang in the mild waves of those unsteady moments which are the harbingers of youth. Only by the later *Smṛti*-writers was the codification considered necessary that girls should be given in marriage in their eighth or tenth year, references to early marriage being not common in any previous literature.

There was a part of the ritual—in Pāraskara, the *Samīkshana*—where the bridegroom had to address the bride with the words—'Soma has acquired thee first; after him the Gandharva has acquired thee. Thy third husband is Agni; the fourth am I thy human husband.'¹ The Dharma Śāstras understand this fourfold division of wifehood in the light of different stages which lead a girl to youth. The third husband Agni owned her at the beginning of her monthly course, when

¹ श्रौतः प्रथमे विविदे गवर्णे विविद उत्तरः । तृतीयोऽग्निष्टेपतिस्तुतीयस्ते ननुप्यजा ।

रेनोऽद्गन्धर्वाय गवर्णेऽद्गद्वये रविञ्च पुत्ताश्चादादग्निर्दक्षनो इति ।—Pār., I, 4, 16.

she was transferred to her human husband¹. It was this time when the *nagnikā* of the time of selection (?) became a wife and proved fit for the fourth-day intercourse after marriage.

Some of the *Grihya Sūtras* do not specify the intercourse on the fourth night and some make it optional on that day—the other alternatives being the sixth or the twelfth night, or, in some cases, the intercourse may take place even after a year. Thus leaves one allowance that while usually girls were married when they were beginning to be youthful, sometimes, some child-girls, such as may have required a year or so to attain puberty, were also married, and in that case it was for the bridegroom to judge how long the *brahmacharya* was to be observed.² In certain cases the optional periods were also meant to provide suitable occasions to husbands desirous of having a particular kind of son.³ This leads us also to the inference that probably the first cohabitation with the wife was identical with the rite of *garbhādhāna*,⁴ and this may go to support a step further the existence of the marriage of mature girls

¹ Cf. पूरु विनय प्रदीपिका शैलशर्माविरचिते ।
 गुणवर्ते कान्ते चर्यामते पुत्रलिप्तिरुचिर्दिता ।
 अश्वमेधेन च कान्तेनैव प्रदीपे च कन्याया ।
 यदोचरेत् श्वशी रत्नमिति प्रतिजितम् ॥

—*Urasmariti* chapter V slokas 7 and 9

² Cf. नतेन यथायत् स्वाम—Kb 4.14. The opinion of Haridhar a commentator of *Pāraskira* that the optional periods are given to suit individual capabilities to observe *brahmacharya* seems untenable. There is little logic in wishing and expecting a newly married young couple to abstain for one whole year—especially when the fourth night intercourse should also have been considered a *samskāra* for the woman and was therefore indispensable. Cf. तदुत्पन्नसंभवात्संस्कारोऽस्तीत्यस्मादयमिति—Bhatta Gopinatha Dikshita in his *Samskhararatnamālā* p. 585.

³ Cf. A, I 8 10-11 Par I 8.21 Bodh I 7 9 21

⁴ Cf. 8 I 18-19

in the Grihya times,¹ no *garbādhāna* being possible in an immature girl.

The choice of the bride over, some day was to be selected for marriage. The Grihya Sūtras prescribe the auspicious occasions when a marriage should take place. During the northern course of the sun, in the fortnight of the increasing moon, under some auspicious constellation—or, as some say, on any convenient occasion²—the marriage rite should have been performed in the morning, the forenoon, at midday, in the afternoon, or in the evening.³ Some Grihya Sūtras specify the auspicious constellations and the auspicious months also, e.g., the stars denoted by *Uttaraphālgunī*, etc.,⁴ and all months with the exception of *Māgha*, *Phālguna* and *Āshāḍha*⁵ mark the time suitable for marriage. According to the Kauśika Sūtra (X, 75, 2—4) all months onwards from *Kārttika* to *Vaiśākha*, or as it pleased one, with the exception, of course, of *Chaitra* and *Āśvina*, made good occasions for marriage.⁶

Modern Brāhmaṇas generally celebrate their marriages during the two or three months of winter and two or three months of summer—usually April, May and June. Among

¹ One may feel surprised to see Mr. Frazer write in his *Indian Thought Past and Present*, p. 282, that 'To perpetuate the sacrificial system sons were married before they were even boys. Girls were hastened in their infancy to the houses of their husbands, there to deem as a dread calamity, inflicted on them for misdeeds in this or in previous births, the not having a son!' From what we have discussed above, it would appear that it was rather just the reverse of this position which then existed. Hopkins writes in his *Religions of India*, p. 270,—“The rite of marriage presupposes a grown girl, but child-marriages also were known to the early law!”

² Āś., I, 4, 2.

³ Hir., I, 6, 19, 3.

⁴ Pār., I, 4, 6, 7.

⁵ Bodh., I, 1, 19.

⁶ Among the Parsees too, the marriage seasons are much the same as among the Hindus. The Parsees also consider the new and full-moon days as auspicious. Tuesdays they regard as inauspicious. Even now-a-days many Parsee families restore to Hindu astrologers for fixing an auspicious day for marriage.—See J. J. Modi, *The Religious Ceremonies and Customs of the Parsees*, p. 17.

certain people there is the custom of celebrating all their marriages once every 9, 10 or 11 years. "The Bhārvāds of Barodā celebrate their marriages only once in every twelve, fifteen or twenty-four years, and the Motālā Brahmins once every four years. The Chettis of Madras have a marriage season at intervals of ten or fifteen years. During the conjunction of Jupiter with Leo which takes place every twelfth year and lasts for about eighteen months all marriages (and various other religious and secular acts) are forbidden in the tract between the Ganges and the Godāvarī, but as the castes who observe this rule are, for the most part, addicted to infant marriage, it has very little effect on the time when real married life commences."¹

THE CEREMONY OF MARRIAGE

It is as a matter of fact the ceremony or the ritual only, with which the Grihya Sūtras have to deal. The details of the ceremony of marriage vary in number and in arrangement in the various Grihya Sūtras. By far the greatest number of details is given in the Sāṅkhāyana Grihya Sūtra. The other Grihya Sūtras do not make any particular additions. The difference lies only in the fact that they either omit some of the details or describe them in a different order. The following is a description of the entire ceremony of marriage as given in the Sāṅkhāyana.

First of all, 'woocers' were sent to obtain consent of the bride's father for marriage. This sending of the 'woocers' and their asking the girl's father for her was itself attended upon by a miniature-ritual, a certain recitation of mantras over them when they started and their offering to the would-be bride a vessel full of fried grain, fruits, barley, etc., after her father had consented to give her in marriage. The *āchārya* of the girl's family put that vessel on the girl's head with certain auspicious *mantras*. The solemn contract was then complete.

¹ Census of India 1911 Vol I p 206

Now, preliminary to starting with the party for the bride's house, the bridegroom was required to perform a sacrifice. This was of the general model of *grihya* sacrifices with the *āvāpa*, i.e., 'the special characteristical offerings' peculiar to marriage, inserted in it.¹ Thereupon certain auspicious ceremonies² were performed for the bridegroom, and then escorted by happy young women³ he proceeded to the bride's house.

The day on which the bridegroom's party was to reach the bride's house (?) a little ceremony was performed for the bride also at her own place. On that night, (or on the second, or on the third ?), after the nocturnal darkness had disappeared, the girl bathed with sweet-scented water and put on a newly-dyed garment, whereafter, the *āchārya*, making her sit down behind the fire, sacrificed with the *mahāvyaḥṛitis*⁴ and made *ājya* oblations to Agni and other deities. Then four or eight

¹ Śāṅkhāyana devotes four khaṇḍas to the description of the sacrifice. Cf. also Pār., 1, 5, 6.

² These auspicious ceremonies are not described by any Grihya Sūtra. But certain such ceremonies are performed even up to this day and occupy several days before the marriage party proceeds to the bride's house. In Northern India, the most important of these are *halda* and *ghuṛa-charḥī*. On the *halda* day, the entire body of the boy is besmeared with yellow turmeric and the marital cord stuck round his right-hand wrist. The *ghuṛa-charḥī* takes place on the procession day a little while before the march of the procession, when, with certain minor accompaniments, the boy is made to ride a horse and drive him a few steps. If the party has to go to another city or village, this ceremony is usually performed on the previous night. Similar ceremonies are performed for the bride also at her own house, with the exception of *ghuṛa-charḥī*.

³ This custom is not described by other Grihya authors. But it seems to have survived in various parts of India even now. Among the Sārasvat Brāhmaṇas of the Punjab, and most Khatri sub-communities, females, especially those belonging to the family, form part of the marriage party. Among some Brahmans of the U. P. the ladies and the lady-guests of the bridegroom's family go to the house of the bride on the second day of marriage, usually known as the *Barhar* day. Among the Parsees, the ladies of the bridegroom's family go to the house of the bride on the betrothal day and make her a money present in silver coins. In ancient Irān this ceremony was called *Nām-pādvūn*. See J. J. Modi, 'The Religious Ceremonies and Customs of the Parsees,' pp. 17, 18.

⁴ Viz., *bhūḥ*, *bhuvah*, *suvah*.

women, who had been regaled with vegetables, *surā* and food, performed a dance four times, and this was followed by distribution of food to Brāhmanas.

The bridegroom with his escort reached the bride's house and, at the proper hour, was, as was the bride, brought to the place where marriage was to take place. The *Gṛhya Sūtra* does not say anything in this connection. It starts with the bridegroom's offering the bride the garment and the salve-box. This leads to the anointing of the two, which, as Oldenberg thinks,¹ was done by some third person. Next, he gave a mirror into her left hand and her relations tied to her body (?) a red and black, woollen or linen cord with three amulet gems in it. This was followed by the bridegroom tying to her body (?) *madhūla* flowers. Subsequently, making her take her seat behind the fire, while she held him, he made four oblations with the *maḥāvyaḥritis*. All these acts were accompanied with appropriate mantras.

The more solemn rites now begin when the bride's father or brother, blessing her with 'be queen with thy father-in-law,' holds the *śruva* or the point of a sword over her head, while she sits facing east. The groom seizes with his right hand her right hand with the thumb, both hands having their palms upwards, and as he murmurs the formula *amohamasmi*, etc., the priest fills with the words *bhuh, bhuvah, suvah*, a new water-pot, throws into it branches of a tree with a masculine name together with *kuśa* grass, and hands it over to a student who observes silence. This is the *stheya* water placed to the north-east, round which they walk. The priest then places a stone to the north, and the bridegroom getting the bride to rise makes her tread on it. Then the couple circumambulate the fire, and, after this, the bridegroom gives her a second garment. Thereafter, the *lājāhoma*, or the sacrifice of fried grain, begins.

¹ For his arguments see S.R.I. Vol. XXIX p. 33 footnote 12.5

The bride's father or brother pours out of a basket fried grain mixed with *Śamī* leaves into the joined hands of the girl. She sacrifices them into the fire and while she does so, the groom mutters the *mantra*. This rite together with the preceding ones, the treading on the stone, etc., is repeated twice or thrice again.

The next ceremony is of making the couple walk seven steps¹ in a north-eastern direction and signifies the establishment of a life-long friendship between the two. The *āchārya* then wipes those steps with the *stheya* water which he sprinkles also on the bride's and bridegroom's heads. The bridegroom then offers him gift.

When the bride departs from the house of her father, she is made to smear the axle of the chariot, on which she is to start on her journey, with ghee. Similarly she does with the wheels and the bulls also. Then a bunch from a fruit-bearing tree is put into each of the pin-holes and the oxen harnessed. The bride is then taken away to her husband's house. In the way a number of expiatory *mantras* are recited and rites performed at different places.

Reaching home, the bridegroom makes her sit on a red bull's hide and, while she takes hold of him, offers four oblations with their proper *mantras*. With another *mantra* he besmears her eyes with *ājya* salve and, touching her hair, pours the remaining *ājya* over her head. Here, some place a boy of good birth from both the parents' sides in her lap. Into his hands the bridegroom gives fruits and requests the Brāhmaṇas to wish an auspicious day.

Then they drink curds together and sit silently until the polar star appears, which he shows her. The bride says—'I see it; may I obtain offspring.' They observe perfect *brahma-charya* for three nights, sleeping on the ground, eating together

¹ Regarding the significance of 'seven' which comes attached to the number from the most ancient times, see J. J. Modi's 'The Religious Ceremonies and Customs of the Parsees,' p. 33. Seven was a sacred number among the ancient Parsians and played a prominent part in the marriage ritual.

boiled rice with curds and serving the nuptial fire. For ten days they do not set out from house.

On the fourth day he makes eight offerings of cooked food. Śāṅkhāyana does not speak of cohabitation on the fourth night. He, however, describes the *garbhādhāna*, to take place after her monthly period. Since the monthly period did not necessarily fall exactly after the marriage, the fourth-night intercourse may not be implied by the rite of *garbhādhāna*. For this implication one may only count upon the injunction to observe *brahmacharya* for three days. So, the fourth-day intercourse was not forbidden, but there was no special rite belonging to it.

The other Grīhya Sūtras are not so rich in description of details as the Śāṅkhāyana. The preliminary sacrifice by the bridegroom after the consent of bride's father was obtained is prescribed in much a passing manner by Āśvalāyana also. Pāraskara does not mention it. He describes the place where the fire at marriage should be kindled (I, 4, 2). From the abrupt manner in which he begins with the rites of marriage at the bride's house, omitting entirely the preliminary rites taking place at the bridegroom's, it seems that this was the same fire as kindled at the house of the bride and around which the wedding rites were performed. Thus is worthy of note that *ātāpa*, prescribed by Śāṅkhāyana to be inserted in the sacrifice preliminary to marriage at the bridegroom's own house, is here inserted after the sacrifice with the *mahāvyaḥritis* which takes place at the bride's house.

Giving the opinion of others, Pāraskara says that the fire at marriage should be kindled by attrition.¹ Pāraskara is a Sūtra-author of the *Sukla* Yajurveda. Hiranyakeśi, a sūtra-author of the *Kṛishna* Yajurveda, also prescribes the laying of the fire in much the same fashion as Pāraskara. Hiranyakeśi also does not describe the preliminary rites performed at the house of the bridegroom. In Pāraskara, we

¹ Pār, I 44

find the bridegroom at once giving the bride the garment and being anointed together with her. Then follows the circumambulation of the fire, and then the *mahāvvyāhṛitī* oblations, the *lājāhoma*, the seizing of the bride's hand (*pañigrahaṇam*), the treading on the stone (*asmārohaṇam*), the sacrifice to Prajāpati and finally the *Saptapadī*.

In Hiranyakeśī, after the fire is kindled, the bride is brought to the bridegroom and he looks at her. She sits to his south, then sips water, and then the groom sacrifices with the *mahāvvyāhṛitī* oblations.¹ After this come in turn the treading on the stone, the seizing of the bride's hand, the sacrifice of fried grains, circumambulation of the fire and the *Saptapadī*. So also in Āpastamba and Bodhāyana, the ceremonies begin at the bride's house. In Āpastamba we have a peculiar rite, the very first one, which may have been entirely local, that the bridegroom puts on the bride's head a net-work of *darba* grass, on it a right yoke-hole, on it again a piece of gold, and then washes her (?)² Then as usual, he gives her a garment, seats her on a mat to the west of the fire, seizes her hand, makes her walk seven steps, circumambulates the fire with her, offers the *mahāvvyāhṛitī* oblations, causes her to tread on the stone and then sacrifices with the fried grains. In the Bodhāyana too the description of marriage begins with the seizing of the hand.

In fact, leaving the sūtras of the R̥gveda, almost all other sūtras begin with ceremonies at the bride's house. So the rites which were performed at the bridegroom's house had perhaps more of the nature of local customs, which differed from one another not only with the difference of well-divided localities but with that of the families of different *R̥ishis* as well, than any strict religious injunction. That such was the case may be gathered from the statement of Āśvalāyana³

¹ Hir., I, 6, 19, 4—7.

² Āp., II, 4, 1.

³ अथ सप्तपदं च अनपदं च ग्रामेन धनं विप्रं तान विवाहे प्रकीर्तयत् । यत् सप्तपदं तद्वद्वानः ।
—Ās., I, 7, 1-2.

also who omitting the points of difference describes only what was common. And then at once he proceeds to describe the common rites, the very same ones which begin and end round the nuptial fire at the bride's house. We can be certain beyond doubt that the really most important rites of the whole ceremony were the *pānigrahana*, *asmārohana*, circumambulation of the fire, sacrifice of fried grains and the *Saptapadī*. All the Gṛhya Sūtras agree in recognising them though they disagree in their arrangement.

Most of the above rites have come down to this day and are universally followed, while a few have been divided among different parts of India. Some of them may be traced to as old a period as the Indo-Iranian, or even Indo-European times.¹ Of the forms in which they exist in various parts of India at the present time Mr Gait has given the following description —

"The essential and binding part of the marriage ceremony varies in different parts. In the Punjab it consists of the *phere*, or circumambulation of the sacrificial fire, which is held to imply the consummation of the vows

¹ Such a one is the *pānigrahana*. See J. J. Modi, *The Religious Ceremonies and Customs of the Parsees*, p. 33—The priest fastens with raw twine their right hands which are grasped by each other. This rite is called *Hathvera* i.e. handfastening. Then in the footnote he goes on—Among the ancient Greeks the ceremony of handfastening was considered as the ratifying agreement of marriage. Among the ancient Romans the priest made the marrying couple sit on chairs which were put together and on which wool was spread and then fastened their hands. The modern Hindus also unite the hands of the couple. In Finland it is the father of the bride who fastens the hands. Among the Assyrians, it was the father of the bridegroom who fastened the hands of the couple with a woollen thread. Cf. also Hopkins in the *Cambridge History of Ancient India*, p. 233—Indeed the author of the *Āśvalāyana Gṛhya Sūtra* (I 7 1) says expressly that in the matter of weddings, customs are diverse and he gives only that which is common usage. Thus he tells how the bride is to go about the fire etc. but does not mention other rites which other Gṛhya Sūtras enjoin. Some of these however are of universal interest and a comparison of the Hindu ceremonies with those of other Aryan speaking people shows that in all probability the Indian ritual has preserved elements reaching far back into prehistoric times.

in the presence of Agni and the other sacrificial gods. In the United Provinces the young couple walk round, not a fire, but the marriage shed or a pole. In the east of these provinces, and also in Bengal and Bihar and Orissa, the binding portion of the ceremony is generally the *sindurdan*, or painting of the bride's forehead with vermilion. That this is probably a survival of a blood covenant¹ is shown by the fact that amongst certain castes, such as the Hāri, the bride and the bridegroom smear each other with their blood, which they obtain by pricking their fingers with a thorn. In Bombay the higher castes follow the practice of circumambulation. The lower castes sprinkle rice over the bride and bridegroom, while some of Dravidian origin pour milk or water over the joined hands of the young couple. In Orissa, their right hands are tied together with *kusa* grass, or their left hands, when the bride is a widow. In Madras there are various ceremonies, such as making them eat from the same dish, or knotting their garments together, or pouring water over them so that it runs from the man to the woman. But the most common is the tying of the *tali*, or necklace, by the bridegroom round the bride's neck. The Brāhman bridegroom places the bride's foot seven times on a mill-stone, a symbol of constancy."²

The ceremonies which took place at the house of the bridegroom after the marriage were, as we have seen, fewer in number. In the way between the bride's and the bridegroom's house, and before starting, some minor rites, which often hardly

¹ We may not yield to this conjecture readily. Among the people of the Punjab, and U. P. also, the forehead of the bride, and specially of the bridegroom, is painted with a round or a vertical mark of *roli*, as the case may be, several times, not only in marriage, but on all auspicious occasions. Among the Parsees too they welcome the bridegroom by giving a mark of *kumkum* on his forehead and sticking rice on it. In the ancient *grihya* ritual, not even once do we find any reference to the existence of a blood covenant. The *kumkum* or *roli* mark on the forehead is considered a sign of prosperity and good luck.

² Census of India, 1911. Vol. I, pp. 257-58.

amounted to more than a recitation of expiatory *mantras* at different places or in case some mishap occurred, took place. In the Śāṅkhāyana, we have seen, the bride smears, before starting, the axle, the wheels and the bulls and puts a branch of a fruit-bearing tree into each of the pin-holes (I, 15, 1—7). Then the two bulls are harnessed, the right one first, as it appears from the *mantra* used (I, 15, 8) and from the distinct mention of it in the Āpastambī (II, 5, 21). These observances look much like local customs or customs divided by time and had almost as many variations as the number of the Gṛhya Sūtras themselves. In the matter of their treatment of post-marriage rites the Gṛhya Sūtras have more of disagreement with one another than otherwise. We have seen how the wife starts for her new home according to Śāṅkhāyana. According to the Sūtra of the other Śākhā of Rigveda we find, however, that, after the final ceremony of marriage, the *Saptapadi*, has taken place, the bride dwells that night in the house of a *Brāhminī* who has her husband and children alive. Here she sees the polar star, which, according to certain Gṛhya Sūtras, she is made to see after reaching her new home, and prays for longevity of her husband and for progeny. Then they start for the new home (I, 7, 21—8, 1).

The carrying of her to the house of a *Brāhmanī* agrees with the description given in the Sūtras of the Sāmavedī where, however, the house is of a *Brāhmana* and situated in a north easterly direction. Then to the west of the fire, on a red bull's hide, she is made to sit silently till the stars appear. There after, the husband offers six *ājya* oblations and shows her the polar and the Arundhati stars.¹ Often they were also required to circumambulate the fire before he showed her the star (Kh., I, 4, 4).

In one case (Pār., I, 8, 10), when the *Saptapadi* is finished, there is mention of a strong man snatching her up from the ground and taking her in an eastern or northern direction in an

¹ G II, 2 17—3 10 Kh., I 4, 1—4

out-of-the-way house where she was seated on a red bull's hide. According to Gobhila and Khādira, the house itself was situated in a *north-easterly* direction.

The Gṛihya Sūtras of the *Kṛishṇa* Yajurveda are at one with Sāṅkhāyana in omitting mention of a Brāhmaṇa's or Brāhmanī's house. But in their other details they do not tally with one another or with Sāṅkhāyana. In fact, Hiranyakeśī and Bodhāyana have no ceremony for the bride's starting on her new home. Jaimini of the Sāmaveda shows her the pole-star before starting; otherwise, he too does not give any ceremony of starting. Āpastamba, on the other hand, requires after the sacrifice with the mahāvyañhṛitis the offering of *ājya* oblations, the sprinkling of water round the fire and the untying of the rope. With a certain *mantra*, the chariot is placed in the 'right position' and she seated therein. Then the bridegroom spread two threads, a dark-blue one and a red one in the right and the left wheel-tracks respectively, upon which he walked (II, 5, 12, 19—24). Both Hiranyakeśī and Āpastamba prescribe the carrying of the nuptial fire. This fire was to be kept constantly and if it went out a new fire was to be kindled by attrition, or fetched from the house of a *Śrotriya*, and one of the couple was to observe fast.¹

On reaching the new house, there were often some women to greet the couple at the door and take her down from the chariot.² Often the custom also was to make the bride enter the house with her right foot first without letting her step on the threshold (Āp., II, 6, 8-9). In the house was usually placed a red bull's hide, in the eastern part of it, on which she was made to sit.³ In Hiranyakeśī and Āpastamba both the bride and the bridegroom sit on the hide and, in Sāṅkhāyana, it is before they enter the house that the bride

¹ Āp., II, 5, 13—18; Hir., I, 7, 22, 1—5.

² G., II, 4, 6; J., I, 22, 2.

³ Ś, I, 16, 1-2; Ā., I, 8, 9; G., II, 4, 6; Hir, I, 7, 22, 8-9; Āp., II, 6, 8—10; J., I, 22, 3.

continue *for one year* if they would have a *Rishi* born as their son. And since monthly illness is recurring, this duration of one year may more reasonably be measured from the first day of their married life than from that of her menstruation period. If it somehow be urged that the menstruation period in question should have been the first under consideration, we have to face the difficulty of having a very narrow application of the injunctions to observe the three-day *brahmacharya*. Such a hypothesis would imply a permissible freedom of intercourse on the occasions of other monthly illnesses.

We know that the fourth-night intercourse was not compulsory in all cases, although, in some, it was. Śāṅkhāyana, Pāraskara and Gobhila think that the proper time for it is after the menstruation period.¹ But there were others, whom Gobhila does not disregard, who held that the fourth-night intercourse should take place (G, II, 5, 7).² We have seen that Hiranyakeśī and Āpastamba held it important. In much later times it had come to be considered to be a *samskāra* for the woman.³ The custom seems to have survived in its outward form up to this day and corresponds to the *phūlaśanyā* of the Bengalees and the *suhāga-rāta* of the northern Hindus; although the day on which these ceremonies are to take place may not necessarily be the fourth and the ceremony may not necessarily result in consummation. The custom of actual intercourse may have become obsolete as time grew upon it, but that it was a real part of the marriage ceremony as a whole, we may infer with fair justice. In the R̥igvedic times too, we see that "the festivities being over, the bridegroom took the bride to his home on a

¹ Ś., I, 19, 1 ; Pār., I, 11, 7 ; G., II, 5, 8.

² This differentiation by Gobhila of his opinion with that of others is again a proof that the *brahmacharya* and the intercourse in question belonged only to the days coming just after the bride had been brought home after marriage.

³ See footnote 2, p. 190.

happiness of the other. We have already seen how the bride was blessed with wishes to be queen with her father-in-law.¹ For the high and responsible position she held in the household of her husband we may refer to Vedic Index, pp. 484-85. Matrimonial conflicts there would not have been many and there would have been little cause for divorce. Although some stray passages, here and there,² may point to a certain existence of adultery on the part of woman or man, such cases should not have been many to menace the innocent expectations of the *grihya* ritual. We do not hear of divorces in the ancient times and what the social treatment with such exceptional cases of adultery, as may have taken place, was, — we do not exactly know.

As for the modern treatment of society, we may say with Frazer that "For all orthodox Hindus marriage is a sacred union and no woman can be divorced. She may be excluded out of caste and thus lose all social status. As long as she remains within the caste, the marriage bond, if performed in Hindu, is binding as a sacrament."³

¹ See p. 194.

² Cf. तस्मादेवविच्छेदितस्य दारेण नोपनिच्छेदुतस्यवग्वित्तपरो भवति ।—Pār., Gr., I, 11,6.

³ Indian Thought Past and Present, p. 272. Cf. also Gait, Census of India, 1911, Vol. I, p. 245—" . . and although a man convicted of adultery may be deprived of her status and excluded out of her caste, divorce in the ordinary sense is an impossibility."

THE VERB IN THE RĀMĀYAN OF TULSĪDĀS

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§ 1. Primitive Indo-Aryan was a highly synthetical language. Just like its noun, its verb was entirely inflexional and had a very large variety of forms. It had ten tenses (including the moods) and three voices—active, medial and the passive, and its roots had two padas—*Ātmanēpada* and the *Parasmaipada*. A root generally had four forms—simple, causal, desiderative and intensive. For the sake of conjugation the roots were divided into ten classes—*gaṇas*—and were conjugated in three numbers and three persons. Besides the conjugational forms, a root had more than half a dozen infinitives, several absolutes and a large number of participles—present, past and future. Thus the forms of only one root sometimes numbered several hundreds.¹

But the Indo-Aryan language has had a general tendency of going from the concrete to the abstract, *i.e.*, from synthesis to analysis and from complexity to simplification, in common with all the Indo-European languages. Even the later Primitive Indo-Aryan, *i.e.*, the language of the later *Samhitās* and of the *Brāhmaṇas*, bears clear evidence of this. The Subjunctive (*lōṭ*) has lost ground and the analytic alternative forms (ending in the auxiliaries from *√as* and *√kṛ*, *e.g.*, *āsa* and *cakāra*) of the Perfect (*liṭ*) come to be used. Certain forms of the Second

¹ Cf. John Beames : A Comparative Grammar of the Modern Aryan Languages of India (referred to in the following pages simply as Beames), Vol. III, p. 4. He makes a reckoning and arrives at 540 conjugational forms of a root. Adding to them certain alternative forms as well as the non-conjugational forms, the number will go higher up.

Future (*luṣ*), e.g., *dātāsmi*, *dātāsi*, *dātāmaḥ* are clearly analytic forms.¹ The variety of the Infinitive is lost which becomes generally restricted to the *tum* forms. This general tendency towards simplification was very early arrested as far as the literary dialect, i.e., Classical Sanskrit, was concerned but it continued unabated in the popular languages.

§ 2 During the Middle-Indian period, in Pāli we find further evidence of simplification and of analytical formation. Of the tenses the two *lin* forms—optative and potential—are confounded and have practically become one, the Second Future is absent and the forms of the Perfect are seldom met with. The forms of the Present tend to take the place of those of the Imperative. The *Ātmanēpada* is losing ground before the *Parasmaipada* and the Desiderative and the Intensive forms of the root have fallen generally in disuse. The Dual Number has entirely disappeared. Pāli has only seven conjugations—the 1st, 2nd, 3rd and the 6th having merged into one. The roots of the other six conjugations also have a general tendency to be conjugated on the model of the first. The phonetic changes, moreover, have rendered many of the verbal forms similar. In effect, therefore, Pāli verb has a much less number of forms than the Primitive Indo-Aryan (or even the Classical Sanskrit) Verb.

This process of simplification has been still further pushed on in the various Prakṛits. More forms of the Present displace those of the Imperative. The Past tenses become jumbled up. The *Ātmanēpada* is entirely lost except for a few stray forms. The conjugations have normally given place to two only—one in *a* and the other in *e*. Further phonetic changes have rendered greater simplicity and similarity of forms possible.

The Apabhramśas carry simplification a step further. Several of the tenses fall in disuse and greater reliance is put

¹ Cf Beames, Vol. III p. 7

on the various participles to express the ideas. The conjugation has practically become one.¹

§ 3. The Modern Indo-Aryan languages represent a stage where synthetical forms have generally given place to analytical ones. In Awadhī² the present is generally expressed now by adding the forms of the auxiliary *hob*—(to be) to the Present Participle, e.g., *dēkhati hañ*—I see (*lit.*, I am seeing), the Past is based on the ancient Passive Past Participle and the Future though representing the ancient Simple Future tense has at least for the first person plural a participial form—*dekhībā* (we shall see). For the Imperative the forms based on the ancient Present are employed except in the second person singular. A large number of periphrastic tenses come to be used—combining a participle with the forms of the root *hob* or *rahāb*. The compound Verbs are very generally used to express the various shades of meaning which in Prim. Indian were expressed by verbal forms. The synthetic Passive has entirely given place to analytic Passive where the Participle is combined with the various forms of the root *jāb*—(to go), or *parāb*—(to fall). The ancient distinction of the Padas or of the various conjugations is no longer kept. In effect, the verbal forms are much less in number than they ever were in any earlier stage of the Indo-Aryan.³

§ 4. The Rāmāyan of Tulsīdas is one of the early texts of Awadhī, and its forms, therefore, well illustrate the stage of the passing of the language from the Middle-Indian period to the Modern Indian.

¹ Woolner : Introduction to Prakrit, § 113.

² Cf. Baburam Saksena : Lakhīmpurī—A Dialect of Modern Awadhī, J.A.S.B., XVIII (N.S.), No 5 (referred to in the following pages as Lakhīmpurī), §§64—121.

³ Taking a typical root in Lakhīmpurī, for instance *dēkhab*—(to see), we have 32 forms of it ; its causal will have another 32 which makes a total of 64 forms of a root. It will, of course, have to seek the aid of the various auxiliaries but its own forms will not be more than 64 as contrasted with several hundreds of Primitive Indo-Aryan as shown above.

§ 5 The roots almost all are the ancient roots except some borrowed stems from other contemporary languages, e.g., *newājē* < Pers in *nawāz*, *dāgē* < Per *dāg*, or *gularāta* < Per *gūlar*¹. Sometimes the ancient participle is taken as a root and then conjugated, e.g., *hatah*—(killed) from which the Rāmāy in has *hataū*—(I kill). The Verbs are either transitive or intransitive, simple or causal. The roots are generally active in sense but a few passive ones are also found, e.g., *chīyat*—(is cut or destined),—or *lahāvaū*—(I am called). Of these *chīyat* is based on the ancient Passive from *√chid*—(to cut) and *lahāvaū* is a modern formation somewhat akin to the causal. A large number of denominative roots chiefly onomatopoeic are seen, e.g., *hīhīnāht*, *carapharāht*, *talaphata*, *līlālīlāi*, *katakātāi*, *lasamasāht*, *lahalahāta*, etc.

The root form, for the purposes of this paper, may be obtained by cutting off the particle *-ana* or *-aba*, as the case may be, from the Verbal Noun, e.g., *larana* *√lar-*, *ānaba* *√ān-*. In cases of roots ending in vowels, only *-na* or *-ba* should be cut off, e.g., *√ho-* < *hōna* or *hōba*.

§ 6 In the Rāmāyan we normally find the Awadhī forms of verb. But occasionally here and there other forms are also met with. For instance Sanskrit *paripālāya*, *ībhāñjaya*, *dārāya*, *visārāya*, Braja *gayō*, *bhayō*, *mayō*, *māryō*, *bēdhayō*,—Hindustānī *Pārahugē*, *Karahīgē* or Bhojapuri *marāyala*, *ghāyala*. The Sanskrit forms are met with generally in prayers (*stuti*) and the Braja ones in metres other than the Dohā and the Caupāl. The Hindustānī and Bhojapuri forms are very rare and may probably be due to the corruption of the text. Only the Awadhī forms are dealt with in these pages. A root has sometimes double forms, e.g., *cahata*, *cāhata*, *bañhata*, *bāñhata*, *lagā* *lāgā*.

¹ Cf. All India Univ. Studies, Vol I, the article on Persian Loan words in the Rāmāyan of Tulsidas pp 71-72.

PRESENT TENSE (INDICATIVE).

§ 7. The following are the terminations:—

	Singular.	Plural.
I	- <i>aũ</i> - <i>ũ</i>	
II	- <i>asi</i> - <i>si</i>	... - <i>ahu</i> ... - <i>hu</i>
III	- <i>ahi</i> , - <i>ai</i> - <i>hi</i> , - <i>i</i> - <i>a</i>	... - <i>ahṛ</i> , - <i>aṛ</i> .. - <i>hṛ</i> , - <i>ṛ</i>

First person singular—the termination -*aũ* is added to consonantal roots and -*ũ* to vowel roots, e.g., $\sqrt{\text{samujh-}} + \text{-aũ} > \text{samujhaũ}$ and $\sqrt{\text{jā-}} + \text{-ũ} > \text{jāũ}$; similarly *kahaũ*, *cahaũ*, *ḍaraũ*, *pāvaũ*, *pūchaũ* *baranaũ*, *lahaũ*, *uḥāvaũ*, *lahaũ*, *hoũ*.

First person plural forms of this tense are not met with. I have found only one example—*kahihi*, p. 228¹ (in which case the termination will be -*ihi*) which probably is of this number. The sense of this particular number of the first person is generally conveyed in the Rāmāyan by a Passive formation.

Second person singular -*asi* and plural -*ahu* are added to the consonantal roots while the other two -*si* and -*hu* are added to the vowel-roots, e.g., *kahasi*, *karasi*, *cāhasi*, *jīāvasi*; *ahahu*, *cāhahu*, *karahu*, *uḥāvahu*.

NOTE 1.—There is an exceptional usage on p. 76¹ *taṛ ghālai* where the termination of the II sg. would be -*ai*.

Third person singular terminations -*ahi*, -*ai* and plural *ahṛ*, -*aṛ* are added to consonantal roots while -*hi*, -*i* and -*hṛ*, -*ṛ* are added to vowel roots, e.g., *citavahi*, *jānahi*, *barakhai*, *mākhai*, *mīlai*; *cikkarahṛ*, *jāgahṛ*, *dēkhahṛ*, *karat*, *dharat*.

¹ The references are to the pages of Tulasī Granthāvalī, Vol. I.

NOTE 2—The aspirated forms are very common in the plural while uncommon in the singular. The unaspirated forms (i.e., ending in *s* and *t*) are very common in the singular while uncommon in the plural.

NOTE 3—An alternative III sg form ends in *-a*, e.g., *laha*, *dēha*, *bhāta*, *lāga*, *śaka*, *hara*, etc.

NOTE 1—Exceptionally *jāya* (pp 227, 269, 295) is found for *jāi* and *jāya* (p 227) for **jār*. But I am pretty sure that these forms do not represent different terminations *-ya* and *-ya* but are only alternative orthographic representations of *-i* and *-r*, respectively. Similarly, in other persons also, e.g., *-ai*, *-au* are sometimes found written as diphthongs but not at others.

§ 8 The use of this Present tense is the same as that of the old Indo Aryan Present (*Lat*) or of the Modern Awadhi Present Indicative.¹ It is also used to express immediate future, e.g., *ulataū* (p 115). The alternative forms where they exist do not appear to indicate any difference in meaning—for instance, *sūhaṭ* and *sūha* convey the same sense.

NOTE—The Present Participle (Active) is used with the various persons to express the sense of the Present Indicative, e.g., *śaba nāṭata śiṭā*, *calē jāta śua*, *jāḥi na jānata iṭḍa* (p 27). More about this will be said when dealing with the Participle.

THE IMPERATIVE

§ 9 The following are the terminations —

	Singular	Plural
I	<i>-at</i> (after consonantal roots) <i>-ā</i> (after vowel roots)	
II	<i>-u</i> <i>as</i> or <i>-ah</i> (after consonantal roots)	<i>-ahu</i> (consonantal roots)

¹ Cf. Lakshimpuri § 70 and § 78.

	Singular.	Plural.
	- <i>si</i> or - <i>hi</i> (after vowel roots)	- <i>hu</i> (vowel roots)
III	- <i>au</i> (after consonantal roots)	
	- <i>u</i> (after vowel roots)	
	- <i>ahi</i> or - <i>ai</i> (after consonantal roots)	
	- <i>hi</i> or - <i>i</i> (after vowel roots)	

First person singular forms of the Imperative are the same as the forms of the Present Indicative.

The second person singular forms in -*u* are more common than the -*asi*, -*ahi* or -*si*, -*hi* forms, e.g., *taju*, *dharu*, *sunu*, *dekhāu*, *bilagāu*, *sunahi*, *karahi*, *utārahi*, *lehi*, *dehi*, *karasi*, *marasi*, *kahasi*, *hōsi*. The second person plural forms of this tense are the same as those of the Present Indicative. The aspiration is absent, however, in one instance, viz., *Karau* (p. 30). The forms of the first person plural and the third person plural are not met with. The Impersonal forms in -*iya* (or *ia*) and -*iahi* (or -*iaht*), e.g., *kahā kahiya*, *hama dēkhi āiya*, *yaha chabi jehi paṭatariya*, *bāyasa paliahi ati-anur-āgā*, *avasi dēkhiyahi dēkhana jōgū*. The third person singular forms in -*au* or -*u* are much more common than the -*ahi*, -*ai* or -*hi*, -*i* forms, e.g., *chūṭau*, *basau*, *hou*, *rahan* and *cukai*, *nasāi*.

The use of the Imperative is just like that of the ancient *lōṭ* or of the Modern Awadhī Imperative. The subject is almost always understood.

THE PRESENT CONJUNCTIVE

§ 10. The Present Conjunctive (or Conditional) uses the forms of the Present Indicative, the condition being expressed by some such particle as *jau*, *jaū*, *jaū pai*, e.g., *jau cūhasi ūjiāra*, *jaū mahesa mohi āyasu dēhī*, *jō bilōki rījhai kuāri tab mēlai jayamāla*, *jō sakhi inhahī dēkha naranāhū*, *pana pariāhari haṭhi karai bibāhū*, *asa bibēka jaba dēi bidhātā*.

Sometimes the Conjunctive particle is not at all used, the sense of the condition being implied, the counterpart of the particle (*taba*, *tau*, etc.) is seldom used

FUTURE INDICATIVE

§ 11 The following are the terminations of this tense —

	Singular	Plural
I	- <i>īhañ</i>	
II	- <i>īhasi</i>	- <i>īhahu</i> (<i>īahu</i>)
III	- <i>īhi</i>	- <i>īhi</i>
	- <i>i</i>	- <i>īhahī</i> (<i>īahī</i>)
		- <i>īhat</i>

First person singular—*e.g.*, *karīhañ*, *dārīhañ*, *jaihañ*, *deīhañ*, *mārīhañ*. The first person plural forms of this are not met with.

Second person singular,—*e.g.*, *jaihasi*, *pachitaisi*
Second person plural—*e.g.*, *aīhau*, *byāhīahu*

Third person singular forms ending in—*īhi* are more often met with than those ending in—*i*, *e.g.*, *karīhi*, *pūjīhi*, *lāghīhi*, *sudhārīhi*, *dēhīhi*, *hōi*, *hōihī*, *niyarāi*.

Third person plural forms in—*īhi* are less common than the others, *e.g.*, *karīhahī*, *karīhī*, *rakhīhahī*, *rākhīhī*, *hoīhahī*, *hōihī*, *dekhīhahī*, *dekhīhī*.

NOTE.—The aspiration in the forms of this tense is very unsteady, particularly in cases where more than one aspirated sounds occur (*e.g.*, in forms ending in—*īhahu* or—*īhahī*) where the tendency is to elide one *h* sound, *e.g.*, *rahīahu*, *hoīahī*, etc.

§ 12 An alternative set of Future Indicative forms is found ending in—*-ba*, *-bā*, *-bī*, *bī* or even *-bāi*. These forms are used in all the three persons and the two numbers. For instance

I sg *ānaba* (*mat*), *mat purānaba*, *karabī*, *āuba*

I pl *lahabā*, *karābā*, *lēbā*, *dēkhābā*, *karavāubā*,
dēbā, *lēbā*, *dekhībā* or *dēkhībē*,

II sg. *taṭ dēkhaba*

II pl. *tumha hōba, tumha jītaba, mānibī, pālībī*

III sg. *pitāhū pachitāba, lakhana bhūjaba*

III pl. *rāma (honorific plural) biyāhaba, janaka
bolāuba sīya, karāba purāri.*

NOTE.—Two forms ending in *-gē*, viz., *pāvahugē* (pp. 62 and 384) and *karahugē* (pp. 330 and 378) are met with. They are not Awadhī (cf. §7 above).

FUTURE IMPERATIVE

§ 13. This is a peculiar tense which is Imperative in sense and at the same time Future in time. It is different from the ordinary (Present) Imperative and is probably peculiar to Hindi dialects. For instance *tumha karahu* means 'do this' and refers to the immediate action and is, therefore, practically Present Imperative. But it differs from *tumha karehu* which means 'you do this in future.' The literary Hindustānī as well has this usage, e.g., *yeh kām karō* is different from *yeh kām karēnā* where the latter stands for the Awadhī *karehu*. The Rāmāyan has this usage for both the numbers of the second person like Modern Awadhī.¹ I call it Future Imperative for want of a better name in order to distinguish it from the ordinary Imperative which is more or less Present in sense. Its terminations are :

	Singular.	Plural.
II	-esu	-ehu (-eu)
e.g.,	<i>jamihahṭ pañkha karasi jani</i>	
	<i>cintā tinahṭ dekhāi 'dihesu' taṭ</i>	
	<i>sītā</i>	... p. 337
	<i>'māresu' jani suta 'bādhesu' tāhī</i>	... p. 350
	<i>'jānesu' brahma anādi aja</i>	... p. 477
	<i>jaisē jāi mōha bhrāma bhārī</i>	
	<i>'karehu' so jatana bibēka bicārī</i>	... p. 27

¹ Cf. Lakhimpurī, § 71, Note.

The termination of II sg. is—*ē*, e.g., *tui jāē, tui karē*.

<i>soi bicāri pati 'karehu' libāhū</i>	
<i>jehi na bahūri hōi ura-dāhū</i>	p 35
<i>aba ura 'rākhchu' jō ha na laheū</i>	p 37
<i>nātha unā mama prāna sama, gṛha</i>	
<i>kinlari 'laiēhu', chamehu alala</i>	
<i>aparādha abu, hoi pravanna</i>	
<i>bara dēhu</i>	p 48
<i>sena samēta 'raheū' sinu jana</i>	p 405

NOTE 1—Just as the forms of the Pre-ent are sometimes used in the case of the Imperative in the Rāmāyan, similarly the forms of the Future Indicative are sometimes used to express the sense of the Future Imperative, *e g*, *byāhiaku*—p 131, *jānaba*,—p 4, *deta rahaba*,—p 154

NOTE 2—The terminations of this tense are not added after the roots based on the ancient Past Participle, *e g*, *bhaye hu* is not possible in this tense, *hōehu* will be used instead. Otherwise the termination of the plural here agrees with the Past Indicative plural second person just as in Modern Awadhi¹

PAST TENSE (INDICATIVE)

§ 14 The following are the terminations —

	Singular	Plural
I	-eū (-yeū, -yaū) -iū	*-enhu -inhu
II	-chi (yehi)	-chu (ychu, -yahu) -ihu
III	-esi (—yesi, —yasi) -isi eu (-yeu, -yau)	-enhi (-yehi) -inhi

First person singular—The termination *eū* is generally added to consonantal roots as well as vowel roots but the terminations within the brackets (in this person as well as in others as put above) are added only to vowel roots, *e g*, *laheū*,

¹ Cf Lakhimpuri § 71 Note

kīnheū, raheū, pāyeū, āyeū, pāyūū. The termination *-iū* is added to such roots as are generally intransitive and have a Feminine subject, e.g., *bhaiū* (referring to *umā*), *rahiū*.

NOTE 1.—It is only generally that the termination *-iū* is found in forms of the Intransitive Verb when the subject is Feminine. There are cases where in spite of the verb being Transitive, forms ending in *-iū* are found when the subject is Feminine, e.g., *siṣa dīnhiū tōhī*—p. 163 (Kaikai speaking to Mantharā), *mama anurūpa puruṣa jaga māhī, dēkhiū kḥōji lōka tihū nāhī*—p. 300 (Sūpanakhā speaking to Rāma).¹

First person plural forms have not been met with except *hama saba sānuja bharatahī dēkhē*, '*bhainha*' *dhanya*, p. 244 (said by certain women who saw Bharata on the way). From this *bhainha* which is feminine I deduce a masculine form **bhaenha* or **bhayenha* and thence the termination *-enha*.

Second person singular termination *-ehi* is added to consonantal roots while *-yehi* to vowel-roots only, e.g., *sunehi*—p. 116, *jagāyehi, sunāehi*—p. 293.

NOTE 2.—A case is met with of a form ending in *-ē*, viz., *jānē nahī marama saḥa mōrā*—p. 344, and another of a form in *-yasi*, viz., *būṛha bhayasi na ta maratehū tōhī*—p. 393.

Second person plural forms ending in *-ehu* (*-yehu, -yahū*), e.g., *kīnhehu, pūchehu, paricehu, baurāyehu karāyehu*. Note 1 above applies to forms ending in *-ihu*, e.g., *bhūlihu, rahihu* but *kīnhihu praśna jagata hita lāgī*—p. 53 (referring to

¹ On p. 259 there are two instances where these feminine forms are used with a masculine subject. Bharata is speaking of himself:—*jāriū jāya janani kḥi kākū*, and *sahiū saba sūtā*. This usage is very exceptional. The reading in an earlier edition (1915, Indian Press) for *sahiū* is *sadeū* (where *d* is probably a misprint for *h*) which removes the difficulty. The other case *-jāriū* is unintelligible unless it be a corruption.

Pārabati) and *stāmini lahihu kathā mohi pāhi* (referring to Kaikēi) where the feminine form is found in spite of the transitive verb. But in these two cases the subject and the object both are in the feminine gender.

Third person singular forms ending in *-esi* (*-yesi*, *-yasi*) are generally used with both the genders, e.g., *racesi*, *līnhesi*, *gahesi*, *ghāresi*, *bādhesi*, *pahūcāyesi*, *sunāyasi*, (*kaikēyi*) *māresi*—p. 169, while the forms ending in *-isi* are used only with a subject in the feminine gender, e.g., *lahisi*—p. 164, *prabodhisi*, *līnhisi*—p. 165, *dīnhisi*—p. 169.

NOTE 3.—These forms in *-isi* are used always implying contempt for the subject. For instance, the subjects of these verbs are Māra (Infatuator), Mantharā, Kaikēi and Gurā when they act wickedly. The forms in *-eu* (*-yeu*, *-yau*), e.g., *lahau*, *jāneu*, *thaleu*, *dēlheu*, *uyeu*, *pāyeu*, *gayau*. I have not found the corresponding feminine forms in *-isi*.*

The third person plural forms in *-enhi* (*-yenhī*) and *-inhi* do not show any difference of gender, e.g., *daccha sutanha upadēsinihi*, (*muni*) *bālala dēlhinhi jāi*, (*dēvanha surasā*) *paṣṭhaihi*, (*niāda*) *carhāinihi dhanahi*, *baṣṭhārenhi*, *lahenhi*, *marāyenhi*.

NOTE 4.—In one case *raheni tahā raci raci nija rūri* (an alternative reading found in 1915 edition for *rahe nija nija anila raci rūri*) the aspiration has been dispensed with.

NOTE 5.—On p. 25 (*linhahu prasna manahū atī mūrhā*) the II sg *linhahu* for *līnhehu* is found. It is unintelligible or may be the Present tense form.

NOTE 6.—Various forms of the Past Participle are used with the various persons to express the sense of the Past Indicative, e.g., *mai nihūrā linha mai kathā sunī*, *hama phālē pāyā*, *tumha parichā linhi*, *māla khasī*, *jehi jaga upajāyī*, *ghālā*, *caulai sumitrā pūrī*. More about this will be said when dealing with this participle.

PAST CONDITIONAL

§ 15. The following are the terminations :—

	Singular.	Plural.
I	-ateñ (-atehñ)	...
	-teñ (-tehñ)	...
II	...	-atehu
III	...	...

Forms of this are found only in the case of first person singular and second person plural. For instance *jañ janateñ* (had I known), *tau hōteñ na hāsāñ* (then I would not have become a laughing-stock), *na ta karateñ kachuka sahāya tumhāra* (otherwise I would have rendered you some help), *khātehñ puni tohñ* (then I would have eaten you), *lai jāteyñ sītahr barajōrā* (I would have taken away Sita by force), *nata marateñ tōhñ* (else I would have killed you), *milateñ tāta kavana bidhi* (how would have I met you, dear), *sunateñ kimi harikathā suhāñ* (how would have I heard the beautiful story of Hari), *jañ tumha milatehu* (if you had met), *jañ tumha avatehu* (had you come).

NOTE.—The Present Participle with or without the particle *jañ*, *jañ pai*, etc., expresses this sense, e.g., *jañ pai jia na hōti kuṭilāñ*—if there were no evil in the heart, *hōta janama na bharata kō*—if there had not been Bharata's birth; similarly *ācarata kō*, *apaharata kō*, *karata kō*; *jō raghubīra hōti sudhi pāñ*, *karatē nahñ bilamba raghurāñ*.

PRESENT PARTICIPLE

§ 16. The Present or Imperfect Participle ends in *-ata* in the case of consonantal roots, e.g., *karata*, *japata*, *jāta*, *āvata*, *achata* and in *-ta* in the case of vowel roots, e.g., *lēta*, *hōta*. A feminine form ending in *-ti* (lengthened to *tī* in *phiratī bārā*, p. 350), e.g., *aghātī*, *āvati*, *parati*, *birājati* and a masculine plural form in *-tē* are also found.

§ 17 This participle is used either adjectively or as a verb. As an adjective it does not appear to undergo any change for gender or number, e.g., (*bānī*) *lahata sādhu mahimā sakucānī*—speech (while) describing the greatness of the good felt diffident, *lahata sunata ela hara abilālā*—one on being said or heard takes off indiscretion, *lhojata bipina phirata dou bhāī*—both the brothers wander in the forest searching, *baranata pantha bibidha itihāsā*, *Bisvanātha pahūce Kailāsā*—Bisvanātha reached Kailāsa narrating tales of various sorts, *sūkhata dhānu parā janu pānī*—as if rain poured on drying paddy (crop)

As a verb it is used in all the three persons and in both the numbers and denotes the Present tense. For the third person singular, however, it ends in *-ti* instead of *-ta*, provided the subject is feminine. The form in *-tē* is found only twice in the text and in both cases is connected with the third person plural subject. A few examples are

Haṭhu lahāvata, sou pragaṭata, lṛpā aghāti, girā lagati pachitānā, sumirata sārada āvati dhāī, saba jānata prabhu prabhuṭā, pada pankojā prēma na jē laratē

NOTE 1—The differentiation of gender mentioned above is not, however, met with when this participle is used in periphrastic passive forms, e.g., *so (sādhumahimā) mo sana kahī jāta na laisē* where one would have expected *lahī jāti*

NOTE 2—There appears to be no distinction between the Present sense expressed by this participle and that expressed by the ordinary Present tense. The Participle is very often used single (unaided by any form of the verb *hōba*—to be) except in the following instances—*cahata haḥi*—p. 144, *jānati haḥu*—p. 163, *japata haḥu*—p. 296, *larata haḥi*—p. 316, *cahata haḥi*—p. 365, *jānata ahaṭi*—pp. 376, 379, *sakucata ahaḥi*—p. 456

NOTE 3—This participle also expresses the sense of the Past Conditional (vide § 15, Note)

PAST PARTICIPLE

§ 18. The following forms of this participle are found in the Rāmāyan :

(a) Masculine singular—ending in *-ā* (in the case of consonantal roots) or *-vā*, *-yā* (in the case of vowel roots), e.g., *avagāhā*, *ānā*, *jitā*, *bācā*, *āvā*, *pāvā*, *gāvā*, *kahāvā*, *pāyā*, *upajāyā*. Even in case of vowel roots the termination is sometimes only *-ā*, e.g., *chūā*.

NOTE 1.—In a few cases, however, instead of *-ā*, the termination is *-a* only, e.g., *baṛṛha*, *kīnha*, *līnha*, *dīnha*, *dīkha*, *ṭūṭa*.

(b) Feminine singular in *-ī*, e.g., *sunī*, *samujhī*, *baṛhī*, *bāṛhī*, *khasī*, *ānī*, *gāī*, *calī*, *pāī*, *chāī*, *daī*, *bhaī*.

NOTE 2.—In a few cases this *-ī* is shortened to *-i*, e.g., *bhai*, *gai*, *dīnhi*, *līnhi*, *kīnhi*, *dīkhi*, *ḍagamagāni*.

(c) Masculine plural in *-ē* (or *-yē* in the case of vowel-roots only), e.g., *anhavāyē*, *āvē*, *āē*, *upajāē*, *kīē*, *gāē*, *gayē*, *chāē*, *ugharē*, *udhārē*, *calē*, *takē*, *dalē*, etc.

NOTE 3.—The *-ē* is sometimes *metri causa* shortened to *-e*, e.g., *bahu bidhi munihi prabodhi prabhu taba* 'bhae' *antaradhyāna*, p. 63.

(d) Feminine plural in *-ī*, e.g., *āī*, *dēkhī*, *paṭhāī*, *pūrī*, *dhāī*, *jēī*, *calī*, *gaī*.

NOTE 4.—The *-ī* is sometimes *metri causa* shortened to *i*, e.g., *āgē hoi calī pantha tehi*, p. 28.

NOTE 5.—Certain intransitive roots ending in *-ā* insert *-n* between the root and the terminations of this participle,¹ e.g., **ḍerāba* gives the form *ḍerānā*, **sakucāba* : *sakucānī*, similarly, *thirānā*, *cirānā*, *akulānī*, *kumhilānī*, *ḍagamagāni*, *lapaṭānī*, *suhāna*, *hulasānī*, *juḍānē*, *parānē*, *lalacānē*, *lukānē*, *sihānē*.

§ 19. This participle is used either as an adjective or as a verb. When used adjectively the gender and the number of the participle agree with the gender and the number of the noun or pronoun defined, e.g., *bidhi prapañca guna avaguna* 'sānā', *udadhi* 'avagāhā'; *bidhubadanī saba*

¹ Cf. Lakhimpur I, § 100, Note.

bhāti 'saiārī,' *ajahū prīti ura rahati na* 'rōli', *āvata hīya* 'hārē' *lāmī lāka halāka bicārē*, *dampati bacana parama* *prīya lāgē/mṛdula bīnita prēma rasa* 'pāgē', *prēma pulakī* *tana mana* 'anurāgī' *mangala lalasa sajana saba lāgī*, *siyamātu tahi samaya paṭhāi dāsī dekhī suai asaru āi*

§20 The participle is used as a verb with all the three persons and two numbers. When the verb is transitive the participle agrees in gender and number with the object while if it is intransitive it agrees with the subject, e.g., *mat nihōrā līnha*, *mat sunī lathā*, *nātha na mat samujhē muni bainā*, *hama phalu pāyā*, (*tumha*) *parichā līnhi*, *bharōsa āiā*, *upajā hīya ati haraju*, *surēsa derānā*, *tīnha (carita) gātā*, *bhai labi buddhi bīmala atagāhi*, *Rāma sudhi līnhi*, *sua astuti līnhi*, *sāgara śrī dāi*, *sura āsana dayē*, *sati satabarasa gāvāē*, *bhūpa dhāē*, *dasi dhāi*, *saba lāhū asisa dāi*, *caulak cāru sumitrā pūrī*, (*sitā*) *cāru dēlhi*, *dāst āi*

NOTE 1—In the case of transitive verbs also, however, the participle agrees with the subject if the object is not in the Direct case but in the Oblique, e.g., *tumhahī mat khāvā*, p 291

NOTE 2—The participle is used without any auxiliary but in stray cases the forms of *hōba* serve as auxiliaries of this participle also just as in the case of the Present Participle (vide § 17 Note 2—above) For instance *baīṭha ahaū*—p 27, *thakita hōhi*—p 89

NOTE 3—The Past Participle retains certain *ardha-tatsama* forms, e.g., *jīta*, *thakita*. A case of the Active Past Participle is also found in *mūrativanta tapasyā jaisi* where the participle does not agree with its noun in gender

NOTE 4.—Certain verbs which are very generally used have sometimes shorter forms of this participle, e.g., *bhā*, *gā*, *bhē*, *gē*

CONJUNCTIVE PARTICIPLE

§ 21 The Conjunctive Participle or the Absolutive ends in -i, e.g., *āi*, *ughāri*, *chāri*, *jōri*, *dēlhi*, *dhari*, *nahāi*, *pahicāni*, *bujhāi*, *māgi*, *lagi*, *lāgi*, *samujhi*, *hāsi*

It is generally used to express any action which is finished before the beginning of the second action by the same agent, e.g., *asa bicāri pragataū nija mōhū / haraku nātha kari jana para chōhū*. In this sense it is generally used without the aid of any auxiliary word. But the following cases occurring in the Rāmāyaṇ probably show the beginnings of the Modern Awadhī usage with an auxiliary :¹

sudhāri kai—p. 301, *nihāri kai*—p. 301, *jāi kara*—p. 338, *khāi kari*—p. 399.

§ 22. Another very common use of this participle is to form the periphrastic sentences, e.g., *chāri sakahṛ*—p. 173, *cali jāi*—p. 378, *sunī pāvā*—p. 293, *būjhi pareu*—p. 175, *boli lēhṛ*—p. 222, *bōri dēta*—p. 226.

NOTE.—*Samujhāya*, (p. 352) shows only a different mode of expressing the sound -i in writing and does not warrant a separate termination. *Akani*, (p. 174) is a direct descendent of Sanskrit *ākarnya*.

PERIPHRASTIC TENSES

§ 23. Periphrastic tenses are very seldom used in the Rāmāyaṇ unlike Modern Awadhī where they have greater scope. The Rāmāyaṇ has the Present Indicative in general use, while that tense has become very restricted in use in Modern Awadhī where the Present Imperfect is employed instead. Even where we do not find the Present Indicative tense in the Rāmāyaṇ, we find the Present Participle instead, unaided by any auxiliary. It is probably in the stray cases of the Present Participle being accompanied by the auxiliary verb *hōba* in the Rāmāyaṇ that the beginnings of the modern Present Imperfect are to be found. The cases mentioned in § 17, Note 2, are the only ones which I have met with.

§ 24. Another peculiar tense is formed by combining the Present Participle with the Past tense forms of *hōba* (e.g., *bhā*, *bhaeu*). This is used in the sense of the past and lays

¹ Cf. Lakhimpurī, § 91.

emphasis on the initiation of an action and its continuity afterwards. The following are the instances I have met with

Janamata bhaī, nārata bhayau, calata bhaī, calata bhaē, chārata bhayō, sūbhata bheu and gātata bhaē

§ 25 The Past Continuous (Imperfect) is formed by combining the Present Participle with the forms (in the Past tense) of *rahaba*—to be. The following instances are found in the Rāmāyan —

Japata rahetū (I was meditating), *jata rahetū, karata rahetū, citavata rahetū, khēlata rahā, karata rahē, delhata rahē, rahē kahāvata* (?), *jogatata rahahī* (?)—p 241, *manavata, bilōkata rahahī* (?)—p 451

§ 26 The Present Perfect is formed by combining the Past Participle with the forms of the verb 'to be.' The instances noted in § 20, Note 2, are the only ones which I have met with.

§ 27 The Past Perfect is formed by combining the forms of the Past Participle with the forms (in the Past tense) of *rahaha*—to be. The following are the instances —

Gai rahī (had gone), *gaē rahē, thārha rahā.*

NOTE.—There is one instance where the form of *as* is combined with the Past Part., viz., *gai hī*, p 379. The meaning is the same as that of *gai rahī*.

PASSIVE VOICE

§ 28. The Active Voice is more generally used than the Passive in the Rāmāyan. Besides the tenses which are based on the Passive Participles, only a few forms of the Synthetic Passive are found.

§ 29 The Passive Present Participle ending in *-ata* is used with the various nouns and pronouns as a verb like the Active Present Participle (vide § 17 above), e.g., *Girā aratha jala vicī sama, kahiyata bhinna na bhinna* (word and meaning like waves of water are said to be different but are not so)—p 13, *prathama pūjāta nāma*

prabhāū (who is worshipped first on account of the influence of the Name)—p. 13, *sarāhiata*—p. 283, *dēkhiata*—pp. 331, 409.

§ 30. A form in *-ia* (or *-iya*) and another in *-iahi* are impersonally used in the sense of the Present or the Imperative—the first when the object is singular and the second (*-iahi*) when it is plural. For instance :

Karia na saṁsaya asa ura ānī (having kept this in the mind, let no doubt be entertained), p. 19.

Sunia kathā sādara rati mānī (let the story be heard with respect and affection), p. 19.

Kahia bujhāi kṛpānidhi mōhī, p. 25.

Gahia amiya jaga jirai na chāchī (nectar is wanted but even whey is not available in this world)—p. 7, *jānia bhagati na pūjā* (neither devotion nor worship is known—to us)—p. 81.

Bandiya malaya prasanga (is respected owing to its connection with Malaya), p. 8.

Khāia pahirīa rāja tumhārē (eating and clothing is done under your 'protection'), p. 164.

The following are the examples illustrating the use of the forms in *-iahi* :—

Bāyasa paliahi ati anurāgū [*hōhi nirāmisa kabahū ki kagā* (let the crows be nurtured with great affection, do they ever become vegetarians?), p. 5; *lakhi subeṣa jaga-baṇcaka jēū*/ *bēsapratāpa pūjiahi tēū* (the swindlers of this world are being seen in gentlemen's guise, they also are worshipped owing to their guise), p. 6.

(*Kabita-mukutā*) *pōhiahi*, p. 9.

Ānga ānga para vāriyahi kōṭi kōṭi sata kāma, p. 96.

avasi dēkhiahi dēkhana jōgū, p. 99; *kariahi, parasiahi, parakhiahi, ṭriyahi*.

NOTE.—A form in *-iē* (e.g., *kariē, hariē, dhariē, pāiē, gāiē, carīē, āniē*) and another in *ījai* (*dījai, kijai, karijai, jījai, kahījai*) are found used in the same sense,

§ 31 There are certain roots which are passive in sense in spite of being used actively, e.g., *haūhu kahācata*—I also am called, *rahē kahācata*—were called, *chījahī*—are destroyed.

§ 32. A Periphrastic Passive is formed by combining the forms (a) of the Past Participle or (b) of the Conjunctive Participle with the various forms of *jāba*—to go. For instance

(a) *Jānā jāi* (is known)—p. 180, *Jāni jāi*—p. 183, *bakhānā jāi*—p. 191, *kahi jāti*—p. 195, *bahē jāta*—p. 166, *jūti na jāhi*, *janani bīsarī jāi*—p. 184, *sahī na jāi*—p. 414, *jūi jāi*—p. 170, *tari na jāi*—p. 196, *jōē jāhi*—p. 219, *jāta na jāni*, *pahirāi na jāi* *barani na jāi*

(b) *Barani na jāhi* *mañju dui sālā*—p. 209, *na jāhi* *bakhāni*—p. 392

§ 33. Another Periphrastic Passive is formed in the following cases by combining the conjunctive Participle with the forms of *paraba būjhi lā pareu*—p. 175, *mohi lakhi parata*—p. 270, *samujhi parā*,—p. 381

CAUSATIVE

§ 34. The Causative is freely used in the Rāmāyan and is formed in two ways, viz., (a) by adding *-ā* to a root at the end or (b) by modifying the vowel of the simple root by ablaut. For instance

Causative	Simple
(a) <i>janāyeu</i>	from <i>jānaba</i>
<i>duāi</i>	from <i>dēna</i>
<i>pahūcāu</i>	cf <i>pahūcesi</i> , similarly
<i>jagāiāhu</i>	
<i>baṛhāiāu</i>	
<i>sahāiāu</i>	
<i>samujhāiā</i>	
<i>magāvā</i>	
<i>jūtāiāhi</i>	

Causative.

Simple.

pahirāē
calāvahi
karāi
milāyesi
lagāvā

NOTE 1.—When this root so lengthened is conjugated, the first syllable if long is made short (*cf.* Lakhimpurī, § 7).

NOTE 2.—Where the root itself ends in *-ā*, a *-n* is augmented, *e.g.*, *ānesu* (bring) from *āvai* (comes).

NOTE 3.—Sometimes instead of augmenting *-ā*, *-ārā-* is augmented, *e.g.*, *baiṭhā*: *baiṭhārā*, *dēkhī*: *dekharāi*.

(b)	<i>mēṭai</i>	from	<i>miṭai</i>
	<i>mēlai</i>	„	<i>milai</i>
	<i>phērahi</i>	„	<i>phirahi</i>
	<i>bōrahi</i>	„	<i>būrahi</i>
	<i>phōri</i>	„	<i>phuṭai</i>
	<i>utārahi</i>	„	<i>utarahi</i>
	<i>nikāsau</i>	„	<i>nikasai</i>

DENOMINATIVE

§ 35. The denominatives are formed by augmenting *-ā* to a word and are generally distinguished as such as they have the insertion of *-n*—between the root (so augmented) and the terminations of the Past tense. They are all intransitive in sense. For instance **bhulla*: *bhulānā*, **ḍera*: *ḍerānā*, similarly *lajānā*, *cirānā*, *thirānā*, *lapaṭānī*, *sakucānā*, *lukānā*, *hulasānā*, *sihānā*, *kadarāi*, *niarāi*: * *niarānī*, *khaṭāhī*, *baurāyahu*, *khuṭānī*.

VERBAL NOUN

§ 36. The Infinitive or the Verbal Noun in the Rāmāyan has generally two forms: (a) one ending in *-ana* (*-na* only in case of certain vowel roots) and (b) in *-aba* (*-ba* only in case of some vowel roots). For instance:

(a) *larana*, *dēkhana*, *bulāiana*, *hūna*, *parusana*,
uṣhana, *paṣhana*, *bhāyana*, *urāiana*, *jurana*

(b) *mīlaba*, *bhulāba*, *jāba*, *tōraba*, *caṣhāuba*

NOTE 1—Stray cases end in -u -uṣhabu 355, *gaiānu*

NOTE 2—A feminine form of the Verbal Noun is sometimes found and it ends in -ni and not -na, e.g., *bōlani*, *mīlani*, *bilōlani*, *hāsani*, *calani*, *ṣhaiāni*

§ 37 The oblique case of the masculine verbal noun ends in -ē, e.g., *pachitānē*, *larilē*, *hāsibē*

NOTE 1—An oblique case of it is found ending in -ai to the root, e.g., *tōrai lāgā*—p. 349, *larai lāga*—394, *lahai lāga*—p. 396, *baranai pārā*, *jarai na pātā*—p. 471, *calai lara*—p. 356

NOTE 2—Another form which to all appearances is an oblique case of the verbal noun is deduced by adding ē to a root, e.g., *uṣarē*, *lasērē*, *pahicānē*, *hasē*, *anhaiāē*, *pūjē*, *bōlē*, *avarādihē*, *baurāyē*, *tōrē*

§ 38. The Direct case of the verbal noun is used—

(a) Either as a subject or as an object of a verb, e.g., *bhīṣana banagavanū* (terrible is the going to the forest), *lahai mīlana munivarya lara* (I shall describe the meeting of the great sage), *rahana lahai mohi rāmā* (let Rāma say that I should stay), *rāma bilōkani bōlani calanī / sumari sumari socati hāsi mīlanī* (Angada recollecting the seeing, speaking, walking and meeting with a smile of Rāma feels sorry), *dui ki ēka sāga hōi bhuālū / hasaba thaṣhāi phulāuba gālū* (O King, can two things happen together with some one—laughing a hearty laugh and keeping in rose—with the mouth closed), *bacaba adēsā* (escape is doubtful), *tehi uṣhabu na bhāvā* (he did not like rising up), *tumhai kohāba parama priya ahai* (anger is extremely dear to you)

(b) The -na (and not -ba) form is also used in a Gerundial sense, e.g., *pūchana āvā* (came to ask) *dēkhana jāū* (I go to see), *tēna calē* (started to receive), *bīdā larāiana* (in order to take—her away)

(c) The *-na* form is also used with $\sqrt{\text{lag}}$ and $\sqrt{\text{cah}}$ —to form compound verbs.

§ 39. The oblique (found by substituting *-ē* for the *-a* of the Direct) is very rare and the forms mentioned below are the only ones I have met with. *Kā pchitānē* (what is the use of regret), *laribē joga*—fit for fighting, *hāsibē joga*—fit for laughter.

The oblique in *-ai* also is rare and is used to form the compound verbs as shown above (§ 37, Note 1) : *tōrai lāgā*—began to break, *baranai pārā*—could describe in full, *jarai na pāvā*—could not be burnt. But *calai kara*—of going.

The oblique in *-ē* (§ 37, Note 2) is very common in the Rāmāyan and is used to express various concrete case-relations. For instance :

Ujarē haraṣa biṣāda basērē—(to them) delight on (others') being desolated and sorrow on (their) getting settled ; *rāma-carita sara binu anhavāyē*—without having bathed them in the lake of Rāma's story, *hamārē bhāyē*—according to my liking, *muyē karai kā sudhā*—what can nectar do on one's being dead, *samaya cukē*—on missing the opportunity.

NOUN OF AGENCY.

§ 40. The following forms of the Agent are found :

(a) Masculine in *-ana*, e.g., *dahana* (one who burns), similarly, *samana*, *dalana*, *harana*, *nasāvana*, *baṛhāvana*.

The corresponding feminine form ends in *-ani* or *-nī* (in case of certain vowel-roots) which is sometimes shortened to *-ni*, e.g., *haranī*, *karanī*, *dēnī*, *taranī*.

(b) Masculine singular in *-avāra* (e.g., *rakhavāra*), and correspondingly masc. plur. in *-avārē* (e.g., *rakhavārē*).

(c) Masc. sing. in *-anahāra* or *-anihāra* (e.g., *mēṭana-hāra*, *bhañjanihāra*), and the plural in *-anahārē* or *-anihārē* (e.g., *dēkhanihārē*), and the feminine in *-anahārī* or *-anihārī* (e.g., *baṛhāvanahārī*).

NOTE 1—There are certain *ardha-tatsama* forms, e.g., *juārā, sūpalārī, dāyī, hārī*

NOTE 2—One form in *-ārē* (plur), viz., *sukhārē*, p 371

COMPOUND VERBS.

§ 41 The compound verbs do not have that common use in the Rāmāyan which they have in Modern Awadhī. They are obtained by combining the forms of the various participles and of the verbal noun with the different verbs. The following cases are met with in the Rāmāyan.

§ 42 Combined with the Conjunctive Participle

(a) *salāba* and *pāvāba* denote the ability to do an action, e.g., *jārī salā*—can burn, similarly, *hoī na valē, chārī salāhī, pūchī salāhī, larī salāsī, jāsu carita lālī kāhu na pāvā* (whose conduct none could perceive), *sunī pāvā* (could hear)

NOTE 1—*Salāba* in one case (*tōī abā salā*) is combined with the verbal noun and similarly *pāvāba* also is sometimes combined with the oblique verbal noun in *-āī* in the same sense, e.g., *jārāī na pāvā dēha bīrahāgī*, p 355

(b) *parāba* expresses suddenness of an action, e.g., *kūdi parā*—jumped in, *khasī parā*—fell down.

(c) *lēba, jāba* and *āvāba* express the completion of an action in its entirety, e.g., *sunī lehu, lōī lē, duhī lēnt, jānī lēu, chūī lēī, bolāī līnha, corāī līnha, chuī jāīhī, parī gāī, carī gāē, chūī gāēī, hoī gāī, sukhāī jāī, colī jāī, calī gāeu, barī āī*.

(d) *dēba* expresses intensity of an action, e.g., *chorāī dīnha, bōī dēta, calāī dīnheu, calāī dīē, delhāī dīhesu, dārī dēhī*.

NOTE 2.—Combined with the verbal noun it gives the sense of permitting a person to do an action, e.g., *dēhī tabā jānā*—p. 372 (then they allow 'him' to go)

§ 43 *Rahāba* combined with the participles expresses the sense of the continuity of an action, e.g., *āvata jāta rahēhu, hoī rahē, lūlāī rahā, sukhāī rahē, ghērī rahē*

§ 44. *Lāgaba* combined with the *-ana* or the *-ai* form of the verbal noun expresses the beginning of an action, e.g., *prasamsana lāgē*—began to praise, similarly *parana lāgē*, *tōrai lāgā*, *karai lāga*, *kahai lāga*, *jūjhai lāga*, *mardai lāga*.

§ 45. *Cahaba* is combined with (a) the verbal noun in *-ana* and with (b) the Past Participle either to express a wish or a near completion of an action, e.g., *grasana cahata*—desire to eat up, similarly *parana cahai*, *bhagāna cahata*, *dēkhā cahañ*, *mōhā caha*, *cīkhā cahati*, *kīnhā cahañ*, *dēkhā cahañ*; *bigarana cahati* (*bātā*)—the thing is about to get spoiled, *cāhata hōna akājū* (wrong is about to be), *nāsa bhā caha* (destruction is about to happen).

HISTORY OF THE FORMS.

§ 46. The Present Indicative (§ 7 above) goes back to the *laṭ* of Prim. Indian. For instance :

pr̥cchati > *pucchai* > *pūchai* or *pūchahi*

pr̥cchasi > *pucchasi* > *pūchasi*

pr̥cchāmi > *pucchāmi* > **pucchaz* or *pucchau* > *pūchau*

pr̥cchatha > *pucchaho* > *pucchahu* > *pūchahu*

pr̥cchanti > *pucchanti* > *pucchaz* > *pūchahz*

In the case of the third person singular and the plural forms an aspiration is brought in to avoid the hiatus at the end. The II plural and the I singular forms are met with at the Apabhramśa stage with *-hu* and *ū* at the end.

N.B.—In the alternative III singular form in *-a*, the *i* of the *-ai* form is lost.

§ 47. The forms of the ancient imperative were giving place to those of the present as early as Pāli. This is evidenced by such forms as Pāli *dētha*, *karōtha* (Pkt. *dēha*, **karōha*) in the II plural for *dadata* and *kuruta* of the Sanskrit. In the Prakrits the forms of other persons and numbers have also been replaced. In the Rāmāyan, the terminations *-u* and *-hi* of the second person singular and *-au* (*-u*) of the

third person singular are the only representatives of the ancient imperative. The form in *-u* of the II singular would go back to the ancient forms such as *ṣṣnu*, *ṣṣnu*. The *-h* form is traceable through Pāli, Prakrits and the Apabhramṣas. The form in *-au* of the III singular goes back to the ancient form, e.g., *yātu > jādu > jūu*. These forms also only alternate with the corresponding forms of the Present and have generally in Modern Awadhi given place to the latter. The *-u* form of II singular has a tendency to survive, however.

§ 48 The Future *-h* forms go back to the ancient Simple Future. The only point to be noted is that the *-ṣya-* which Pāli and the Prakrits generally represent by *-ṣa* (e.g., *gamīṣyati > Pkt. gamiṣṣai*) is represented in the Rāmāyaṇ by *-h*. The *-h* alternated with *-ṣṣa* even in the time of the Prakrits, e.g., Hala's *Sattasāi* gives the form *pavasāṣi* (Skt *pratīṣyati*), I, 46.

The *ba* forms of the Future are surely based on some Passive Participle since they are used in the Rāmāyaṇ with all the persons. Beames (Vol. III, § 53) suggested the Participle in *tūya* which had a future implication to be the basis of these forms and he is right in that. For instance *bhāvita vyam > hōavvam > *hōabbam* or **hōabīyam > the forms hōba, hōub, hōbi, etc.*

§ 49 The Past tense (§ 14 above) is passive in origin and is based on the passive past participle (ancient *lta*). The regular terminations which are appended to the Present (viz., the representatives of the ancient *-mi*, *-ṣi*, *-ti*, etc.) are added to the participle* to restrict it to the various persons and numbers, otherwise the singular participial form would be

* Cf. Woolner Intro to Pkt. § 118 Note

* Beames III p 148 and Hoernle Gram of the Gaudian Languages § 503 Grierson states that the enclitic pronouns are added to the Eastern Hindi forms (vide I. S. I. Vol VI, pp 4-5). To me there does not appear to be much difference between the two views considering that the same forms would result by holding either view.

applicable to the singular in all the persons and similarly the plural. That by the time of Tulsīdās the passive character of this tense was not lost sight of is proved by such examples as *mohi sama yahu anubhayau na dūjē*—p. 158, *dīnheū mōht rājya bariyāi*, and others (see Note 1 under § 14), where the form agrees with the object in number and person. The confusion suggests the passing stage of the forms of this tense from the Passive to the Active.

§ 50. The Past Conditional is based on the Present Participle. We have seen that the Present Participle by itself indicates a past condition (§ 15, Note); in this conditional tense only the enclitics are appended to the Present Participle.

§ 51. The Present Participle is the outcome of the ancient form in *śatr* which in Pāli and Prakrits invariably ends in *-anto*, e.g., *gacchanto*, *janto*. In the Rāmāyan as well as in modern languages the nasal is lost somehow. Ordinarily of the combination *-nt-* of terminations only a nasalization survives, e.g., Skt. *yānti* > Pkt. *jānti* > *jāṛ* and *jāḥṛ* and therefore ordinarily the descendent of *janto* would be *jāṛ* or *jaū*. But instead we find *jāta*. It is probable that this was a fresh formation, therefore, adding the termination *-ata* to the root form.

NOTE.—The form in *-ti* is found by adding the feminine termination to the Participle.

§ 52. The Past Participle is based on the ancient Passive Past Participle in *-kta* generally, e.g., *kṛta* > *kṛtaka* > *kīa* > *kiā* whence obl. *kiē* and feminine **kīi* : *kīhī*—in *kīhā*—the aspiration is to avoid the hiatus; *varṇita* > *varaṇia* > *baraṇā* (*ia* > *ā* by contraction ¹), similarly *hārita* > *hārā*; *baīṭha* < *upaviṣṭaka-uvaiṭṭhaa vaiṭṭhaa*—*baīṭhā*; *rītē* < *riktaka* and so forth.

There are some forms which are not traceable to Sanskrit but to Prakrits only, e.g., *dīnha* < Pali *dinna*, the conjunction of consonants being simplified, the previous vowel lengthened as

¹ Jules Bloch : La Formation de la Langue Marathe, § 65.

a compensation and an aspiration brought in to avoid the 'hiatus.' In the Prim Indo-Aryan the Pass Past Part. had two forms either in *-na* or in *-ta*, e.g., *lūna*, *hīna*, *līna*, *pūrna* in *-na* and *gata*, *bhūta*, *prōta*, etc., in *-ta*. The root *dā* and some others had probably double forms at the beginning, of which only *-ta* form survived in the Classical Sanskrit. Similarly in the Rāmāyan we find *kūna* (for Skt. *kuta*), *līna*, *līna*, etc.

The oblique form and the feminine form of the participle are on the model of the noun ¹

§ 53 The Conjunctive Participle has 2 form which probably has come from two different sources, viz., (1) from the Absolute of the Prakrits in *-ta* and (2) from the Infinitive in *-tum* (Skt. *tum*). For instance *kar* < Pkt. *karia* where *a* by *nd* by became very weak and at long last was lost, similarly *kar* > *karitum* > *-karitū*—*karitū* where *u* being weak is lost at long last.

The Conjunctive Participle is ordinarily derived from the absolute in *-ya* (Pkt. *ia*) only but I am led to believe from certain usages in the Rāmāyan that it is the descendent of two ancient forms—the Absolute and the Infinitive. If we refer to the compound verbs (§ 41 and the following) we see that the Conjunctive Participle is combined with various verbs. For instance with *śalā*, e.g., *jāri śalā* which exactly represents Sans. *dagdhum śal not* ✓ *śal-* was very generally combined with the infinitive in *tum* and it seems improbable that this idiom was lost and the absolute in *-ta* came to be employed instead. Similarly the Infinitive was employed with the forms of ✓ *yā* very generally in Sanskrit as well as in the Prakrits (e.g., Karpūramanjari, I, 30 *vēdhum jāi*, *vilīhum jāi*) chiefly in the latter as a beginning of analytical passive—and I am pretty sure that this very idiom has survived in the Rāmāyan. Using the *-ta* form in these cases would be impossible. Moreover,

¹ Cf. Noun Declension in the Rāmāyan of Tulsidās, Ind. Antiquary Vol. LII 1923 pp 71—76 where the history of the oblique case has been dealt with fully

it seems impossible that the Infinitive in *-tumun* which has all along been so generally used should have lost all representation in the Rāmāyan and that too all of a sudden.¹

THE PASSIVE

§ 54. The passive is represented in the Prakrits by inserting *-ia* -or *-ijja-* between the root and the personal termination. But in the Prakrits themselves beginnings of analytic formation of the Passive are traceable as evidenced by the example quoted above from Karpūramanjari. In the Rāmāyan we find a stage where the synthetic passive is losing ground and the analytic passive is coming into use.

§ 55. The ancient Passive is represented by (a) the Passive Present Participle which is still used in a passive sense unlike the Pass. Past Part. which is losing it on account of being used in an active tense, (b) the forms in *-ia* and *-iahi* (§ 30 above) and (c) certain roots which are passive in sense being derived from passive forms.

§ 56. The Pass. Pres. Part. is the descendent of the Passive Part. in *śānac*. In the Prakrit times this was substituted by the *Parasmaipada* termination so that we have such forms as *dhavalāntē* for Skt. *dhavalāyamānē*. Thus the form in Prakrit for *kriyamāṇa* would be *karijjanta* or *karīyanta*, the latter being represented in the Rāmāyan by * *kariata*. I have found only a few forms which have been noted in § 29.

§ 57. I am sure that the forms in *-ia* and *-iahi* as illustrated in § 30 are passive in character since they are used impersonally. The form in *-ia* is derivable both from the Pass. Pres. III sg. and Pass. Imp. III sg. For instance, Skt. *kriyatē* will become either *karijjai* or *karīai* in the Prakrits. Some dialects have adopted the former, e.g., *karījai* in Braj while others have adopted the latter, e.g., the Rāmāyan,

¹ My respected friend Dr. S. K. Chatterji tells me that phonetically *-iu* > *u* and not *-i*. But there are certain stray cases where *-iu* is represented by *ī*, e.g., *ghī* : *ghīu*.

where *larīa* > *larīa* > *larīa*. The form is similarly derivable from Skt. *lariyatām*, Pkt. *larijjau* or *larīau* whence *larīau* > *larīa*. That the Rāmāyan form has descended from both the forms probably is shown by the double use which it has.

The form in *-iahi* is a plural of the *-ia* form obtained by adding *-hi* to it. *-hi* is seen to be the distinctive marks of the plural in some of the tenses above.

§ 58. Certain roots are derived from the ancient passive and therefore give the passive sense in spite of active formation, e.g., *chīyaba* < *chīdyatē* -*chījja*, similarly *bi-araba*. Modern Awadhī has a large number of these and hence has come to have four forms of the root, viz., passive, active, causal and double causal.¹

§ 59. The analytic passive has a fair number of examples as given in §§ 32-33. Modern Awadhī has developed quite a number of forms from the same combinations.²

§ 60. The causative of the Rāmāyan is also to be derived from the ancient causative. There were two ways in which the causative could be formed either by (a) modifying the vowel of the root, e.g., *bhinatti* *bhēdayati*, *karōti* *kārayāti* or by (b) adding a *pa*—between the root and the termination, e.g., *dadāti* *dāpayati*. In Sanskrit the use of the latter forms is very restricted but it is commoner in the Prakrits. The Rāmāyan has both the forms, for instance (a) *mīlati* *mēlayati* would in the Rāmāyan become *mīlati* *mēlē*—*mēlei* *mēlai*, similarly *tara* *tūrai* and then prefixing the form by *u*—*utārai*. The (b) forms are much commoner, e.g., **vardhāpayati* *vaddhātē* *bārkhāveti*, *baṛkhāvai*, similarly *parhāvai*, *karāvai*, etc.

NOTE.—The insertion of *r* in such forms as *baṛthārā*, *dekharāvā*, is probably a dialectic variation of the *v* which results from ancient *p*.³

¹ Cf. Lakhimpur, § 115 Note 2.
² Cf. Lakhimpur, §§ 105—111.
³ Cf. Beames III p. 80.

§ 61. The augmentation *-a* in the Denominative is the representative of the Skt. *āya* in the same sense. The Awadhī denominative is thus traceable to its parent *āya* > *āa* > *ā*, e.g., **sthirāyatē*: *thirāci*: *thirāi*, similarly *cirāi*, etc.

§ 62. The verbal noun, in *-ba* (obl. *-bē*, etc.), goes back to the ancient participial forms in *-tavya* on which the Future tense is also based. For instance *kartavyam* (to be done) will have a Prakrit form *kariavvam* from which *karabbā* and then *karaba*. The transition of the meaning from 'to be done' to 'to do' is quite intelligible as being one more instance of the passive form losing its passive sense and so in effect becoming active.

The *-ana*¹ form (obl. *-anē*) goes back to the verbal noun in *lyuṭ* so commonly used in Sanskrit as well as in the Prakrits. The use of the same in the Rāmāyan also points to the same conclusion. Besides its use as a noun, it was alternately employed in the sense of the infinitive *tumun*; for instance one could say either *yaṣṭum yāti* or *yajanāya yāti*. It has retained the same sense in the Rāmāyan also (§ 38 *b*). The use of the verbal noun with *lag* also supports the same conclusion, e.g., Skt. *karaṇē lagnaḥ* has its representative in the Rāmāyan in *karana lāga*.

NOTE 1.—The feminine forms are formed from the masculine by adding *-i*.

NOTE 2.—I have not been able to connect the oblique form in *-ai* to any ancient form except if it has an affinity with the causal form of the *tumun*, e.g., *karāivum* > *karāivū* > *karai*. The oblique in *-ē* (§ 37, Note 2) is a riddle to me, still.

¹ Hoernle derives this form from Skt. *-anīyar* and is supported in that view by Kellogg. I would, however, agree with Beames in deriving this Eastern Hindi form of the *-na* infinitive direct from the ancient forms in *lyuṭ*. A point to be marked is that this infinitive in *-na* has a peculiar usage (*vide* § 38, *b* and *c*) which the *ba* form has not. Were it a descendent of *-anīyar* form, it would be strange that a descendent of *tavya* could not be used in the same sense,

§ 63 The noun in *-na* had sometimes in Sanskrit (e.g., *dahanah*—one which burns, *lavanah*—Ved. Sans. one who does) as well as in the Prakrits the sense of an agent. This has been represented in the Rāmāyan by the Noun of Agency in *-na* (§ 40 a). The (b) and (c) forms go back, as suggested by Beames, to the verbal noun plus *-pālakah* (Pkt. *īālāw* > *īāla* or *vāra*) and the verbal noun plus *-dhārakah* (Pkt. *hāraō* > *hāra*) respectively.

NOTE.—*Sulhārā* < *sulhalāraka* through *sulhaāra*.¹

¹ I have not dealt with certain minor phonetic changes found here and there in the Rāmāyan while dealing with the verb in general above. The Rāmāyan doubtless needs a separate elaborate study of sound change.

PHYSICAL THEORY OF SOUND AND ITS ORIGIN IN INDIAN THOUGHT.*

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तीर्थराजं नमस्कृत्य जयदेवपदाम्बुजम् ।

ध्यात्वा भक्त्या यथाशास्त्रं शब्दतत्त्वं निरूप्यते ॥

I. INTRODUCTORY NOTE.

In the history of philosophical as well as of common thought in India, as everywhere else, the theory of sound occupies a very important place. An attempt is being made here to trace its origin and discuss its nature.

In India, however, the so-called 'sound' represents a particular phase of the wider problem of 'Çabda,' of which it is, in common parlance, described as a synonym. We shall, therefore, to make our discussion thorough and complete, take up also those aspects of the *Çabda* which, being occult and mystic, are not generally considered in popular works on philosophy.

II. THE ORIGIN OF ÇABDA OR NĀDA.

When by gradual fructification the Karman of all the living beings is exhausted, the Primordial Cause (Māyā), wherein the

The Process of
Universal Des-
truction and Crea-
tion · Genesis of
Nāda

entire universe has dissolved itself, becomes extinct in the conscious Īçvara.¹ This is known as Universal Destruction (Pralaya). There the universe is not for ever lost (ātyantikanivṛtti),

which only is possible, when every Jīva belonging to it has realised its self ; but it exists there potentially, that is, in the subtle

* I owe much to my teachers—Dr. Jhā and Pandit Gopīnātha Kavirāja, for this paper.

¹ (i) मङ्गलैः प्रविलेभिषु भेदेभ्योऽस्त्वदर्शनात् ।

द्रव्यसत्त्व मपद्यन्ते स्वाश्रया एव जातयः ॥—Bhartrhari.

(ii) *Vide* Yoginīhrdayadīpikā, pp. 9 and 35. The Princess of Wales Sarasvatī-Bhavana Texts Series, Benares Ed.

form of *Çakti* (Potency) ¹ In course of time, due to the force of the *Adrsta* of the beings, a kind of desire for creation is produced in *Īçvara*, also known as *Çiva*, when He manifests His Duplicate Shape, namely, the forms of *Çiva* and *Çakti* (the Supreme Energy), ² after which the *Çakti* vibrates gently ³ and produces the *Bindu*.⁴ The *Bindu* represents the equilibrium of three factors,⁵ namely, *Bija*, *Nāda* and *Bindu*, among which *Bija* and *Bindu* stand for its non-conscious (*acit*) and conscious (*cit*) aspects, respectively, ⁶ and *Nāda* their combination ⁷

¹ Vide *Durbalācārya's Com. on Māñjūsā* p 173 79 Chowkh. Ed

² सञ्जो न भवति दन्तु रौद्ररूपेण ।

तन्निष्ठा तत्र धारणा मय्या धर्मिभूता ॥

स्वयमेव द्विरवतारः त्रिवर्तिकाभेदेन ॥ —*Kāçikhaṇḍa*

This is also known as His *Līlā* stage

³ There is a difference here between the view of the *Vyākaraṇa* as has been given above and that of the *Tantra* represented by the *Sāradātīlaka*. Here the *Tantra* holds that from *Çakti*, *Nāda* is produced and from *Nāda*, *Bindu* is produced. This *Bindu* is sub-divided into *Bindu*, *Nāda* and *Bija*—vide *Sāradātīlaka*, p 1 verses 78, *Jivānanda's* Ed

⁴ The perfect of the Continuum is Pure *Cit* and the lowest limit of discreteness is the *Bindu* as a form of Supreme Energy—Woodroffe's *Power as Matter* p 187 18-20

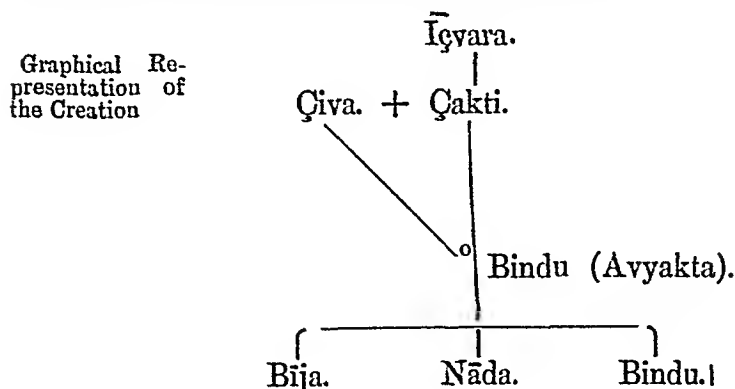
⁵ That is, the *Acidamṣa* and not the *Cidamṣa* which is *Çiva* Himself. In other words as it appears to me, *Bija* stands here for *Çakti*, which is also corroborated by the *Tantra* vide *Infra*, Foot note 8. But then there is another difficulty. *Balañ Bhatta* says in his *Com. on the Māñjūsā*—*अविद्यमानं न भवति तेषां सत्त्वगुणरूपं* p 174 27 28 which cannot be justified for *Māñjūsā* after all here is nothing but *Çakti*—*Vid. Com. on the Sāradātīlaka* p 9 Benares Ed

⁶ (i) स तत्त्ववत् निराकारोक्तिरु क्तिरसत्त्वः , द विद्युन्मति विद—*Prapāñcāra*

(ii) सत्त्वः पञ्चमस्य विद्वत्तः पुनरेव—*Yoginīhrdaya* pātala I verse 12 *Sarasvatī Bhavana* Benares Ed

⁷ The connotation of these three sub-divisions as given in the *Sāradātīlaka* *Tantra* is as follows. *Bindu* is described as *Çiva* (*Çivātmaka*) that is, consciousness. *Bija* as *Çakti*, and *Nāda* as the amalgamation of the two—vide *Sāradātīlaka* p 1 verse 9

For facility of reference a graphical representation of the order of creation, as already described, is given below :—



1. PARĀ VĀK.

Thus we see that Nāda is produced from the Bindu. It is mixed with consciousness which predominates there and is in-
 articulate ;—this is known as *Ṣabda-Brahman* (Eternal Verbum). It is the immediate cause (Upādāna-kāraṇa) of the Universe,¹ according to the Vaiyākaraṇas ; *Rava* and *Parā*, etc., are its synonyms. Though this Nāda is all-pervading (Sarvagata), it is manifested only in the *Mūlādhāra*—a mystical centre of spiritual energy supposed to be located at the base of the spinal column—by a peculiar type of rarefied air (Saṁskṛta-Pavana)

¹ (i) चिन्दोऽन्तस्ताद्विभक्त्यनानाद्रवो व्यक्तात्मकोऽभवत् ।

च एव श्रुतिसम्पन्नं शब्दरूपेति गीयते—quoted in the *Mañjūṣā*, p. 175, Chowkh. Ed.

(ii) वागेव विरला मुषनानि जज्ञे—quoted by Bālaṁ Bhaṭṭa in his Com. on *Mañjūṣā*, p. 177.

(iii) Doctrine of Pratibhā in Indian Philosophy—by Pandit Gopīnātha Kavirāja. Published in the *Annals of the Bhāndārkar Institute*, p. 11, sec. 3.

(iv) अनादिनिधनं ब्रह्म शब्दतरवं यद्वचस् ।

विवर्ततेऽर्धभावेन प्रक्रिया जगती यतः—*Vākyapadīya* of Bhartṛhari, I. 1.

(v) ब्रह्मेदं शब्दनिर्वाणं शब्दशक्तिनिवन्धनम् ।

विवर्तते शब्दमात्राभ्यस्तारोपे प्रविलीयते—quoted by Puṣyārāja in his Com. on *Vākyapadīya*, I. 1.

generated on the spot.¹ This manifested Nāda is free from all so-called vibrations (nispanda) and is known as Parā (Transcendent) Vak. It is very subtle and is described by certain authorities as amenable to the hypersense of the Yogins in the state of *Samādhi*.² This is also known as the Supreme Kalā (Paramā Kalā) and remains as an impartial spectator of its own modifications—Paçyantī, etc.³ In fact, it is only an undisturbed state of consciousness (sāmarasyamā pannā prakāçāṃçamātrā)

2 PAÇYANTĪ VĀK.

The Nāda, in course of further manifestation, rises up to the navel and assumes a distinct character when it is known as

Paçyantī. It has Īçvara as its ruling deity.⁴ It is an object of cognition through Manas in the state of deep concentration. It is described as undivided, free from succession, and eternal. It does not require the instrumentality of any external object to bring out its inner content. It remains ever fresh and pure, and all the impurities are from without as a matter of accident upon it and are not essentially connected with its nature. In the Tāntric Literature, therefore, it is described as representing the Sixteenth Kalā of the Moon,⁵ which is never affected by the

¹ इदमेव भूतान्तरेतिवत् सद्बुद्धिर्भवत्य —quoted in Mañjūsā p 176

² Vide Mañjūsā, p 175 But we will see that Parā is above the reach of the yogins also though some hold it amenable to the hypersense of the yogins—vide *Infra*, p 245¹¹ 12

³ आत्मनः सद्बुद्धेर्वाच्येत इति सा परमा कथ्यते ।

यतिवृत्ताद्व्यवस्थायाम् परा सा सद्बुद्धिरिति—Yoginīhrdaya, I, 36

⁴ (i) Vide Mañjūsā p 178 (ii) This Īçvara is identified with Ramā. Vide—

तैत्तिरीयसंहितेति आदात वदेष्टा इत्यादि-आवत ।

वामा सा सद्बुद्धिर्वाच्येत इति सा परमा कथ्यते । —Saradātīlaka I 10

⁵ It is believed that the fifteen Kalās (digits) of the moon which are subject to constant change—sometimes waxing and sometimes waning, represent the world of flux. The Sixteenth Kalā on the contrary is never associated with change. It is the eternal, self-luminous witness, ever bright and spotless watching silently the play of cosmic forces—which too are its own emanations

rays of the sun, and remains always shining by its own light. *Puruṣa* or the Pure Self is the philosophical term usually assigned in technical literature to this Immortal *Kalā* or the *Paçyanti Vāk*. It is also known as *Daivī Vāk*,¹ and is very subtle.²

According to the *Yoginīhṛdaya*, *Paçyanti Vāk* is described to be at the stage of Will-power³ and because of this the universe which was in the form of *Bija* begins to be manifested. It is, therefore, known as *Vāṁā*—that which vomits, that is, that which manifests the universe.⁴ *Puṇyarāja* has identified it with *Pratibhā* and the *Veda*, in his commentary on the *Vākya-padīya*,⁵ and there he clearly points out that this *Paçyanti* is the *Prakṛti*—Primordial Cause—of the modifications in the form of words.⁶ According to the *Sāradātilaka* it is the modification of the *Bija* aspect of the Unmanifested *Bindu*.⁷

It is beyond any doubt the cause of the mental dispositions of persons, for discriminating between right and wrong; but even then its nature remains unchanged, pure and above the sphere of empirical exigencies. In other words, it lends itself to the ecstatic vision of the *Yogins* alone.⁸

¹ (i) अविभागा तु पर्यन्ती सर्वतः सद्भूतना ।

स्वरूपज्योतिरेवान्तः सेषा वागनपाविनी ।

सेषा संकीर्त्यनाराप्रि नित्यनगन्तुकैर्वैले ।

अन्तर्या कलेव होमस्व नात्यन्तमभिभूयते ।

तस्या दृष्टस्वरूपायानधिकारो निवर्तते ।

पुरुषे षोडशकले तानादुरन्तां कलान् ॥—Com. on the *Vākya*, I. 144.

(ii) विन्देन देवतां वाचनन्तानामान्नः कलान् ॥—*Bhavabhūti's Uttaracarita*, I. 1.

² उद्गतार्था (= आन्तरार्था-आन्तरं स्वरूपज्योतिरेव) च पर्यन्ती सूक्ष्मा वागनपाविनी—

quoted in the Com. on *Mañjūṣā* by *Bālaṁ Bhaṭṭa*, p. 181.

³ इच्छाशक्तिस्तदा सेव पर्यन्ती वपुषा स्थिता—*Yoginīhṛdaya*, I. 38.

⁴ बीजभाजस्थितं विरव स्फुटिकर्तुं यदोन्मुखो ।

वाग्ना विश्वस्य वगनदङ्कुषाकारताद्गता—*Yoginīhṛdaya* and *Yoginīhṛdaya-dīpikā*, I. 37.

⁵ *Vide* Com. on *Vākya-padīya*, I. 14.

⁶ वाचिकाराणां प्रकृति पर्यन्त्याख्याम्—*Ibid*.

⁷ बीजादजायत वाग्ना—*Sāradātilaka*, I. 10.

⁸ *Vide* *Bālaṁ Bhaṭṭa's* Com. on *Mañjūṣā*, p. 182⁵; and also *Puṇyarāja's* Com. on *Vākya-padīya*, I. 144.

It is of an infinite variety according as it reveals itself without any reference to the existence of the external object, as it reveals itself along with the object which appears intermixed with it, as it reveals itself together with the particular object having limited connotation, again, as it is formless and as it is with a form, the latter, that is, which has form, is that in which the knowable is merged, with which the knowable is mixed, and which is common to both the Moving Principle and the Principle of Rest, and so on.¹

3 MADHYAMĀ VĀK.

When the same purified air rises up and reaches the heart, there is another manifestation of the Ābda—
 Origin of Ma
 dhyamī Vāk. Brahman,² known as *Madhyamā Vāk*. It is described as an object of our intellectual cognition. If our ears be closed, for instance, a sound will be heard within as that of rumbling and so forth owing to the forcible contact (*abhiḥāta*) of the inner air. The intraorganic sound as thus heard is quite distinct, though as a matter of course, it is not audible to others. It is the subtlest form of *Pranava*.³ *Jyesthā* is another synonym of this sound.⁴ It has *Hiranyagurubha* as its presiding deity⁵ which is its own modification.⁶ It is identified with the conscious aspect of the Supreme Power (*Jñāna-Śakti*). It is the support of the universe and its usage.⁷ So when the universe is

¹ ब्रह्मणी तु सा ब्रह्मबलमिति प्रवृत्तया, कतिपयदेवाकार, मन्त्रिणीयाकार विराकार च चरित्विनामैवावकाशः सदाशिवोवावकाशः च मन्त्रात्मकबोधोवावकाशः चैव चरित्विनामैवा—Panyā rāja's Com. on Vākya-pāṇīya, I 144

² Vide *Mañjūṣā*, pp 178-179

³ ब्रह्ममन्त्रस्य—vide *Mañjūṣā* p 179

⁴ Vide *Durbalācārya's Com on Mañjūṣā* p 173 ⁷⁹ also

⁵ Vide *Mañjūṣā* p 179

⁶ Vide *Sāradātīlaka*, I 10

⁷ Vide *Mañjūṣā* p 182

reduced to the unmanifest, it also dissolves itself into the Bindu from which it originally sprang up.¹

The cardiac region is conceived as the seat of Madhyamā Vāk. It has really no succession but it appears to possess it because of its close proximity to it. It can be known through the instrumentality of Buddhi (intellect) only. It is also very subtle. Being pure and transparent, it seems to take on any variation which the bio-motor power of the organism (Prāṇa-Vāyu) induces within the system.²

These are the three subtle forms of Vāk. Out of these, we have seen above, Parā is Transcendent beyond time, while the other two are Immanent in time. As such, Parā is above all predication in thought and language even of the yogins,³ while in Paçyantī, the yogins can in their mystic experience realise the distinction as well as the unity between the subject and the predicate of all judgments. Though the latter is equally eternal with Parā, it differs from it, in being luminous as the very nature of it indicates.⁴ The stage of Madhyamā,⁵ however, is not so subtle. They describe it as *Çrutigocarā* or audible, though to one's ownself only.

¹ ह्यानशक्तिसदा ज्येष्ठा मध्यमा वायुदोरिता ।

ऋजुरेतामयी विश्वस्थिता प्रथितविग्रहा ॥

तरङ्गतिदशायान्तु वैन्दवं रूपमास्थितः ॥—Yoginīhṛdaya, I. 38-39.

² मध्यमा तु अन्तःसन्निवेशिनी परिगृहीतक्रमेव बुद्धिमात्रोपादाना सूक्ष्मा प्राणदृश्यनुगता (प्राणदृष्टिगतिक्रम्य) प्रतिगृहीतक्रमेण सत्यव्यभेदे समाविष्टक्रमशः—Punyarāja in his Com. on Vākya, pp. 56-57.

³ It is because of this we do not agree with Dr. Prabhāta Chandra Chakravartī who says "the first three forms being comprehensible only by the *yogins*." Vide his translation of the Mahābhāṣya, Foot-note 3, page 8.

⁴ Vide 'Doctrine of Pratibhā'—Gopīnātha Kavirāja.

⁵ It seems to be so called because out of the four varieties of Vāk, Parā is beyond time and hence is out of question; while out of the remaining three Madhyamā is the middle one. It may be also due to the reason that it is the modification of Nāda which comes between Bija and Bindu.

4 VAIKHARĪ

Now we turn to the last manifestation of Vāk, known as *Vaikhari*. When the Vāyu, passing through the *Suṣumnā*, reaches the cranium (Mūrdhan), as the way to the above is generally closed for lack of intuitive knowledge, it turns back and finds a way out, through our mouth.¹ In the mouth there are various places, such as, larynx (kantha), palate, tooth, etc., which the air touches in passing and where it gives rise to ordinary sound called *Vaikhari*.

This is the sound which we ordinary people use and hear. Some are of opinion that only a portion of this Vāk is used by us, while the remaining portion is beyond the average use.² According to the *Sāradātīlaka*, it has the Bindu for its source, and out of this (*Vaikhari*), *Rudra* manifests himself. This accounts for its name *Raudri*.³ It is at this stage that the *Āchādi-Brahman* has its gross (Sthūla) manifestation and, therefore, thus has *Virāṭa* as its presiding deity. It arranges our mode of breathing.⁴

Vaikhari stands for the *Kriyā* aspect (*Kriyā-Ākha*) of the Supreme Power. It is the body of the universe in the form of speech.⁵ It appears in various forms, such as articulate (*vyakta*), inarticulate (*avyakta*), and so on.⁶

¹ (i) ऐक्ये यन्निष्पत्तिः —

(ii) अथ यदा ह्येव (मूलावातमुद्रिता वाक्) वरुणे स्थिता तावद्योषान्निष्पाद्यते तद्विनिष्पत्तिरिति तत्र

‘वैद्यप शङ्खभूति—Nyāyakoṣa. Foot note under Āchādi p 789 Second Ed

(iii) गुणव साधो नमुन्या इति—Rgveda, I 22 164 45, Max Müller's Ed

(iv) Vide Ātapatha Brāhmana 4. I 3 13—17 Ajmer Ed

² तत्रापि वाक्ता विविदेव यदावतिष्ठन्वात्तु काव्यमव्यक्तावातात्—Punyarāja's Com on Vākya, I 144.

³ Vide Sāradātīlaka I 10 Yoginīhrdaya, I 40

व्यक्तेषु विहिते वादी कृतवर्तमानाः ।

वैकरी वाक् यथावा वा मावतिष्ठन्वात्तु—quoted in the Com on Vākya, p 56

(i) यथावतिष्ठन्वात्तु यद्वावतिष्ठन्वात्तु ।

विवाहिकानु रिदीर्घं तैत्तिरीय विवदिवद्वा—Yoginīhrdaya, I 40

(ii) वावत्यवतिष्ठन्वात्तु वाक्ता—Dīpikā on Yoginīhrdaya I 40

⁴ (i) विवदिवद्वावतिष्ठन्वात्तु वावत्यवतिष्ठन्वात्तु वाक्ता—अथवावाक्ता वा वृत्तुविवदिवद्वावतिष्ठन्वात्तु वावत्यवतिष्ठन्वात्तु—quoted in the Com on Vākya I 144.

(ii) Vide Māñjūśā, p 179

These are the four kinds of Vāk.¹ Patañjali, the great commentator on Pāṇiniya Sūtras, is of opinion that the Ākṣara,² that says,—‘there are four kinds of words (padajātāni); and these are known to those Brāhmaṇas only who are learned; of these, three are very subtle and hence are not used by ordinary people who speak out the fourth only,’ means by ‘four kinds of words,’ Nāma (nouns), Ākhyāta (Verbs), Upasarga (Prefixes), and Nipātas; each of which is sub-divided into Parā, Paçyanti, Madhyamā and Vaikhari.³ Thus the three sub-divisions of each being very subtle

¹ (i) परा, पर्यन्ती, नयना, वैत्तरी, इति चत्वारि वाचः पदानि । एतैः नादात्मिका वाक् नूला-धारादुदिता सती ‘परा’ इत्युच्यते । सैव हृदयमभिगम्यती ‘पर्यन्ती’ इत्युच्यते । सैव बुद्धि गता विवक्षां प्राप्ता ‘नयना’ इत्युच्यते । अथ यदा सैव वक्त्रे स्थिता तात्त्वोष्मादिब्यापारेण वदतिर्निर्गच्छति तदा ‘वैत्तरी’ इत्युच्यते —Nyāyakoṣa, Foot-note under Ākṣara, p. 789.

(ii) चत्वारि वाचपरिणितानि पदानि, तानि विदुर्वाङ्मना ये मनोमयः ।

गुदा क्षीरं निहिता वेद्म्यन्ति, तुरीयं वाचे ननुष्या वदन्ति—R̥gveda, I. 22. 164. 45.

(iii) Vide Ātapatha Brāhmaṇa, 4. 1. 3. 13—17.

(iv) Vide Mahābhāṣya, p. 39; Nirṇayasāgara, Pandit Shivadatta’s Ed.; and also Kaiyyaṭa’s Pradīpa, Nāgeṣa’s Uddyota and Shivadatta’s Foot-notes on the above, pp. 39-40.

(v) Vide Nyāyakoṣa, p. 789, Foot-note, Second Ed.

² Vide Supra, p. 247, Foot-note (ii).

³ (i) The sense of this sub-division is brought out from the letter ‘ca’ of the Mahābhāṣya itself, is the opinion of my father Mahāmahopādhyāya Jayadeva Miśra, Benares, who was considered as an authority on Pāṇiniya grammar

Now as far as the Mahābhāṣya is concerned, the meaning of the Ākṣara is almost clear, when we take the letter ‘ca’ into consideration. But Kumārila Bhaṭṭa does not appear to take any notice of this explanation. He says, “if by four kinds of Vāk we mean Nouns, Verbs, Prefixes and Nipātas, then the second half of the Ākṣara (Guhā trīṇi nihitāni, tūriyam vāco manasyā vadanti) seems to have no connection with the first half; for human beings do use all the four kinds of words.” This criticism of Kumārila apparently shows that according to him, Patañjali did really mean by four kinds of Vāk—Nouns, etc., only, and that the letter ‘ca’ has no significance. For the sake of facility I quote here the whole passage from Kumārila—यत्तु ना नाख्यातापसर्ग-निपातचतुष्टयानुगतं वैवाक्यमनमतस्थितं तदपि लोकसिद्धत्वादेव नास्तीत्याख्यापेक्षम् । एतद्विपर्यये च वर्णनानि ‘तुरीयं वाचे ननुष्या वदन्ती’त्युक्तद्वयेन स्यात् । चतुर्णामपि पदानां तानां ननुष्यैरुच्यमानत्वात् —Tantra-Vārttika, pp. 214-215, Benares Sans. Series, Ed. 1903.

are not used, while the fourth only is spoken. Kaṣṣyapa also supports the above view *

We have seen that these divisions of Vāh are really the modifications of the Eternal Supreme Power.¹ As such, all

According to Kaṇḍikā himself—'एतत् चतुर्विधं प्रमाणं' means that by which *Viśāk* is known is of four kinds—*Pratyakṣa*, *Anumāna*, *Upamāna* and *Arthapatti*. Ibid.

(ii) To say that *Parā* and *Paçyanti*, in accordance with the above explanation of the *Mahābhāṣya*, are also sub-divided into *Nonn*, etc., does not appear quite logical for it is very difficult to say that there can be any distinction possible between *Nonn*, *Verb*, etc., even in the *Parā* and *Paçyanti* stages, although some appears to hold distinction at the *Paçyanti* stage (*vide Com. on the Śāradātilaka*, p. 4¹⁴⁻¹⁷, Ben Ed) It is perhaps because of this difficulty that *Ṇgeṣa*, in his *Uddyota* also explains the *Mahābhāṣya* in the following manner *Ṭk* is divided into *Parā Paçyanti*, *Madhyamā*, and *Vaikharī*, of which the last is sub-divided into *Nonn*, *Verb*, etc. This interpretation of *Ṇgeṣa* seems only to remove the difficulty of making distinction between *Nonn*, *Verb*, etc., at the *Parā* and *Paçyanti* stages but is not in the order in which perhaps the author of the *Mahābhāṣya* wants to have.

author of *Viḍe Mahābhāṣya*, p 33 also *kaiṣṣa* and *ṇgeṣa* on

(i) *Udayasagara*, Pandit Shrivadatta a Ed the same *Nā Balam Bhaṭṭa's* Com. on *Manjūgī* p 162^{17 19}

(ii) *Vide* note of Yajuh Prātīkālhyā, p 6 Benares Ed

(iii) Vide F₁ be somewhat different, as follows, to the model

There seems to be somewhat different order as to the modifications of this. The Sāradātīlaka again gives this order in the following form—Out of Çakti Dhvani is produced, then comes Nāda, which gives rise to Para (Vāk) which is followed by Paçyanti, after which comes Madhyamā and then follows Valbhari. Now this cannot be the moon which is visible to us (of course this moon) wherein the two other have combined and Bindu is Arka (the light). As Para and others are produced out of Bindu they are not different from Soma (the moon) Sūrya and Agni—vide Sāradātīlaka on Yoginīhrdaya, I 10-11 and also a quotation from Kāmakalāvīlāsa vide Du

the modifications possess Consciousness.¹ Leaving *Parā* aside, we find the other three—*Paçyantī*, *Madhyamā* and *Vaikhari*, represent *Indu* (the moon), *Sūrya* (the sun), and *Agni* (the fire) respectively.² It appears that this also suggests the idea of Creation (*Sṛṣṭi*), Protection (*Sthiti*—*rakṣaṇa*) and Destruction.³

This is in brief the process of creation of Sound. Out of these four, the first three lead to mysticism and are more or less connected with *Tantra* and *Yoga*. Hence I leave that aspect of it and confine myself, in the present paper, to the nature and characteristics of the *Vaikhari*, with which we are closely concerned. Henceforward, instead of the term *Vaikhari*, sound or *śabda* will be used.

III. NATURE OF PHYSICAL SOUND.

By sound we mean that object (*artha*) of which the organ of apprehension is ear.⁴ Before proceeding to discuss at length the nature of sound and all particulars connected with the problem, it is desirable in

Meaning of the term *Śabda*

the outset for the purpose of clarity of understanding to find out the category under which it is usually put by the philosophers. The *Upaskāra* explains the necessity of this, thus: we find

Doubt about the classification of sound.

soundness and perceptibility by the ear existing in sound and because the difference is not observed both in homogeneous objects—the twenty-three attributes, and in the heterogeneous objects—substances and actions (*Karmāṇi*),⁵ hence the doubt about its classification.

¹ (i) स्वप्नैतद्विवर्तमानं परमव्याप्तास्वात्मनश्च चेतनमिति बोध्यम्—*Bālaṃ Bhaṭṭa's Com. on Mañjūsā*, p. 178²⁻³.

(ii) *Vide Com. on Vākya*, I. 144, p. 57⁵⁻⁶.

² ते ज्ञानेष्वाक्रियात्मनो यद्वाच्यं तद्वैकल्यात्—*Sāradātīlaka*, I. 11.

Vide Dīpikā on Yoginīhrdaya, I. 11-12.

³ श्रोत्रग्रहणे शब्दः च शब्दः—*Vaiṣeṣika Sūtra*, II. 2. 21, *Gujarātī Press Ed.*

⁴ शब्दे शब्दत्वं श्रोत्रग्राह्यत्वं बोधतभ्यन्ते. तच्च तुल्यजातीयेषु त्रयोदशतीयेषु अर्थान्तरभूतेषु ब्रह्मेण कर्तुं च विशेषस्य व्यावृत्तेः समवया समवयव दर्शनात् (अदर्शनात्) शब्दः किं गुणो द्रव्य कर्तृ वा इति संशयं जनयति—*Upaskāra on Vai. Sū.*, II. 2. 22, *Gujarātī Press Ed.*

(a) Sound is a substance because it is apprehended by direct contact of the sense-organ according to the followers of Tūlitā—the Bhaṭṭa School

At the very outset, we start with the view of the Mīmāṃsakas of the Bhaṭṭa School, as expounded in some of the Nyāya-Vaiśeṣika and Mīmāṃsā works, according to which sound is a substance.¹ The following are the arguments put forward in support of this view

(a) Sound is a substance, as it is apprehended by the direct contact of the sense-organ, like a pot. There can be no question as to the possibility of a substance being cognised by the auditory-organ because the Manas which is admittedly an organ is

¹ (i) शब्द इति एक एव हि नीलमिति—Udayanācārya in his Nyāyapariśuddhi, Ms. page 930¹³—lent by Dr Gangā Nātha Jhā

(ii) शब्दो द्रव्य—Nyāyahikvati, p 75¹⁶ Nirmayasaṅgāra Ed

(iii) शब्दश्च द्रव्य इव—Mahādeva Paṇḍita in his Nyāyasāra p 180¹ Reprint from the Paṇḍit

(iv) Vide Tārakakarakṣa pp 133¹ and 143² Reprint from the Paṇḍit.

(v) Vide Kusumāñjali Bodhini of Varadarāja, pp 75 76, Saraswati Bhavana text

(vi) Vide Nyāya Māñjari p 229² Vizianagram Ed

(vii) Vide Prakaraṇapāñcīkā of Čālikanātha Miçra, p 145¹⁶, Chowkh Ed

(viii) Vide Padārthadīpikā of Kaṇḍa Bhaṭṭa p 39¹⁹

(ix) Gāṅgā Bhaṭṭa's Bhāṭṭa Cintāmaṇi, published in the Pañḍit, Old Series, Vol V p 239 col 2¹⁷ or Chowkhamba Benares Ed 1900 pp 20¹¹ and 21²³

(x) Dr Gangā Nātha Jhā's Prabhākara School of Pūrva Mīmāṃsā, p 94⁴

(xi) Dr A B Keith—Karma Mīmāṃsā p 53¹⁸⁻²⁰ Heritage of India Series 1921 Dr Keith clearly mentions here that Kumārila is credited with admitting also the substantiality of sound and he gives for his reference—Ślokaśārttika p 401 (v 183) But I am sorry to note that his reference is altogether wrong

(xii) Dr Saty Chandra's Indian Logic p 109⁷⁸

(xiii) Čālika Nātha Miçra and Varadarāja Miçra quote a Kārika—शब्दो द्रव्य इति द्रव्यं कथं तद्वत्तया नैव न द्रव्यं कथं तद्वत्तया in Prakaraṇapāñcīkā p 145 and Tārakakarakṣa p 133 which supports the view that sound is a separate substance

known to apprehend a substance. The only condition necessary is that the sense-organ be *Niravayava*.¹

(b) Sound is a substance as it is the substratum of qualities like loudness, dullness, etc

(b) Sound is a substance is also proved on the ground that it is a substratum of soundness and qualities like perceptibility by the ear, omnipresence,² number, velocity (Vega)

etc.,³ for a substance is that which is a substratum of qualities,⁴ or to put it in the words of a Naiyāyika—that which is not the substratum of the absolute non-existence of a quality.⁵ We cannot say, the Mīmāṃsakas hold, that the

Presence of qualities in sound is not a case of mere imposition.

presence of quality in sound is a case of mere imposition (*āropa*); for no apprehension of qualities, which do not belong to sound, is possible by the auditory organ; that is, quali-

ties belonging to other substances will never be cognised by the organ of hearing. As a matter of fact, however, the qualities described above are, in fact, apprehended by the ear only. We cannot deny this fact, on the ground that just as it is possible to have the perception of a piece of sweetmeat by one sense-organ—the eye, while its taste—a quality—by another sense-organ—the organ of taste, so the sound may be said to be cognised by the auditory organ, while its qualities by any other sense-organ; for the Mīmāṃsakas hold, if the auditory organ be destroyed, the above-mentioned qualities

¹ Nyāyalilāvati, p. 75¹⁶⁻¹⁷; Padārthadīpikā, p. 39¹⁹; Tār-kikarakṣā, p. 133³⁻⁴; Prakaraṇapāñcikā, p. 145¹⁰⁻¹³.

² Nyāyalilāvati, p. 75¹⁸; Upaskāra on Vai. Sū., II. 2. 22.

³ Vide Padārthadīpikā, p. 39¹⁷⁻¹⁹. That sound is all-pervading (Vibhu) is clear from the fact that a particular letter, which was heard at one place, can be uttered in another.

⁴ क्रियागुणवत्त्वमवाधिकारमिति द्रव्यलक्षणम्—Vai Sū., I. 1. 15.

⁵ गुणत्वन्तावानधिकरणं द्रव्यम्—Udayanācāryya's Lakṣaṇāvali, p. 3¹¹.
Reprint from the Pañdit.

will never be apprehended, while in the case of the instance

The qualities
of sound are not
apprehended by
recollection

quoted above, it is possible to have the taste even when the organ of vision does not exist.

They also disprove the argument held by the

Naiyāyikas that the qualities of sound are apprehended by recollection (Smṛti), on the ground that if the qualities of sound be apprehended by Smṛti, then the inference of the presence of colour in citron, because of taste as held by the Naiyāyikas, will become a case of *pratyakṣa*.¹

(c) Vallabhācārya quotes the view of the Mīmāṃsakas

(c) Sound is a
substance also be-
cause of recogni-
tion.

that sound is a substance also because of recognition (*pratyabhijñācca*).² This form

of recognition is supplied by Kaunda Bhāṭṭa,

thus Viṣṇu utters the very letter 'ga' which

was uttered by Īra, and the same letter, for instance, 'ga,' which was uttered a watch before is being uttered just now.

(d) Sound is a
substance as it
possesses
Karmān.

(d) That sound is a substance is also

proved by the fact that it possesses

Karmān.

It is not the earlier writers alone who have mentioned this view but even such a late writer as Gāgā Bhaṭṭa, alias

Gāgā Bhaṭṭa's
view about sound
as a substance

Viṣṇuvara Bhaṭṭa, supports this view in his

Bhāṭṭa-Cintāmaṇi, where he enumerates Śabda

as one of the *dravyas*.³ He adds there that

sound being an eternal and all-pervading substance, the

relation with it will be the *Samyoga* only and not the

Samavāya as others think. As to the argument held by

some that, sound is a quality, because it is apprehended by

¹ Nyāyasilāvatī p. 75 16-22

² Nyāyasilāvatī, p. 75¹

³ Padārthadīpikā p. 39 15-17

⁴ Bhāṭṭa-Cintāmaṇi, p. 21 22 23 Chowkhamba Ed

an external organ of sense, Gāgā says that such a reasoning will lead to fallacies. Thus, if the above ground be accepted as valid to prove that sound is a quality, then it also can very well establish that *air* and the *generality-colourness* (rūpatva-sāmānya) are also qualities; for they are apprehended by external organs of sense, namely, the tactual organ and the visual organ respectively.¹ Moreover, he further adds, that the absence of qualitiveness (guṇatva) in sound is inferred by the perceptual knowledge (pratyakṣa) characterised by the absence of qualitiveness belonging to a visible substance. That is, wherever there is the perception of an object which is not a quality of a visible substance, there is the absence of qualitiveness; sound is known as such; hence, it does not possess qualitiveness. In other words, it is not a quality.²

A question can be raised here that there will be no *Samyoga* relation possible as held above between sound, which

An objection. both sound and Dik being all-pervading, there will be no activity and hence no conjunction between the two.

is, as held by the Mīmāṃsakas, an eternal and all-pervading substance, which is proved by the fact that sound is cognised everywhere, and the auditory organ, which is limited Dik³ and hence all-pervading. Both sound and Dik being all-pervading cannot have conjunction;

for there cannot be any activity in all-pervading substances to cause the conjunction required. Activity is the *asamavāyikāraṇa* of conjunction and the presence of an *asamavāyikāraṇa*, hold the Naiyāyikas, is necessary to produce a positive effect (*bhāva-kārya*). To this the Mīmāṃsakas

¹ According to the Naiyāyikas the same sense-organ which gives the direct perception of an object also gives the perception of the generality belonging to that object. Hence the visual organ which perceives the colour also perceives the generality-colourness (rūpatva-sāmānya).

² मत्त्वद्वयगुणत्वाभावविगिष्टमत्त्वद्वेय गुणत्वाभावानुमानाच्च—Bhāṭṭa-Cintāmaṇi, p. 20.

³ *Vide Infra*, pages 268-269.

reply, that activity (Kārmān) is not a necessary precondition of conjunction, as the latter is known to follow from conjunction produced by conjunction (samyogaja-samyoga). Again, by a valid inference it is proved that there can be such a conjunction. Thus —Two all-pervading substances (vibhūti) meet together, as there is nothing to create an obstacle between the two substances, like a jar and the Ākāśa.¹

The Mīmāṃsakas point out that time, space, Ākāśa, etc., being all-pervading, any product—be it a substance, or quality, or action—may in a sense be described as residing in it, but this is hardly sufficient to justify sound's being classed as a quality.²

There is the School of Madhva which also holds that the articulated form of sound (Vainātmaka-śabda) is a substance.³

It may be mentioned here that it is not the Mīmāṃsakas only who hold that sound is a substance, but the Vaiyākaraṇas represented by Nāgeśa also support the view. The reason adduced by them is that it possesses qualities, viz, loudness, dullness, etc., and consequently satisfies the definition of substance.⁴

IV ARGUMENTS AGAINST THE ABOVE VIEW

The Naiyāyikas and the Vaiśeṣikas take their stand prominently against the view held above. They

¹ Bhāṭṭa-Cintāmaṇi p 20^{11 23} Chowkh Ed

² Nyāyamañjarī p 229 5-10 Vizianagram Ed Mañjūśa a Com on Nyāyasiddhānta mukhāvā, p 367¹² Mysapore Madras Ed

³ Vide Pramāṇadīpadārthaprakāśikā by Laṅkākeśi Bhāskara p 11 quoted by Bhīmācārya in his Nyāyakośa p 790 Foot-note Second Ed

⁴ Mañjūśa p 218¹⁴ Nyāyakośa Foot-note under Śabda 791 Second Ed

Nyāya-Vai-
śeṣika view is
that sound is
not a substance
as it resides in a
single substance.

are of opinion that sound cannot be a substance, because it resides in one substance only, while all that are produced substances (Kāryadravyas) do not subsist in a single substance.¹

As regards the inferences and arguments put forward in support of sound being a substance, Vallabhācārya holds

Sound cannot
be a substance
on the alleged
ground that it
is cognised by
the direct per-
ception of the
sense organ.

that they are untenable, because the grounds adduced are not free from fallacies. Thus regarding the inference 'sound is a substance, because it is apprehended by the direct contact of the sense-organ,' he suggests

whether sound is apprehended by the method of Residue, taking all the categories into consideration; or by only denying its being a quality, taking only one of the categories into consideration. In the case of the first alternative, the answer is that it is the very instrument by which the Naiyāyikas prove it a quality; and in the second, the Mīmāṃsakas cannot deny the possibility of its being an action (Karman). Thus, the ground (hetu)—'apprehended by the direct perception of the sense-organ'—as supplied above, is fallacious.

Again, regarding the inference that ear can apprehend a substance, it is argued by the Naiyāyikas in reply that it

The auditory
organ cannot ap-
prehend a sub-
stance.

cannot do so, if the substance be eternal, as held by the Mīmāṃsakas. The reason is that an external organ of sense does not come

in contact with eternal substances; like the ocular organ. This is a contradictory inference (Satpratipakṣa) to that which has been given above in support of the view. It is further said that even if ear be able to cognise *eternal* substances, it can never have the apprehension of an *all-pervading* substance, because no contact is possible with the latter.

As regards the evidence of Pratyabhijñā (Recognition), it is said that so far as sound is concerned it is an impossibility,

¹ एकद्रव्यत्वात् द्रव्यम्—Vai. Sū, II. 2. 23; Nyāyamañjarī, p. 229¹⁷⁻²⁰.

for nobody feels that the sound produced at a later moment is identical with that which was produced at an earlier moment.

Pratyakṣa is of sound is impossible

It has been said, by the Mimāṃsakas, that 'the qualities of sound' are also cognised through the ear, as otherwise the existence of colour in citron cannot be proved through inference. To this the Nyāyikas reply that it is really the recollection (Smṛti) which gives rise to the idea of number, etc., belonging to sound, for even in an ordinary inference of fire from smoke it is seen that it is the recollection of the generalisation (vyāpti) which leads to the conclusion. As to the case of inferring the presence of colour in citron on the ground of its having taste, it is said by the Nyāyikas, that even if the connection of the sense-organ with the citron be cut off, the inference can be established by recollection. Similarly, when the connection of the qualities of sound with the sense-organ is cut off, there will be no difficulty in apprehending the qualities of sound by means of recollection.

The so-called qualities of sound are apprehended by recollection (Smṛti)

Gangeṣa Upādhyāya refutes the above view of the Mimāṃsakas, in the following way the qualities of loudness, dullness, etc., really belong to air and not to sound through which they are apprehended only, just as the qualities (e.g., dirt, etc.) belonging to a mirror appear to belong to the face. If it be so, a question can be raised that loudness and dullness, etc., being the qualities of air cannot be apprehended by the organ of hearing which is limited Ākāṣa. To this the answer is given that the auditory organ never apprehends these qualities, but we know that the organ of touch, which is the manifestor of air, pervades the entire body and as such it is also present in the auditory organ. It is due to this organ

Gangeṣa Upādhyāya is of opinion that the qualities of loudness, dullness, etc., belong to air and not to sound

And the qualities are apprehended by the organ of touch (skin) present in the ear-cavity

of touch that the qualities of dullness, loudness, etc., belonging to air are cognised.¹ Rucidatta Upādhyāya supplies an instance

Rucidatta supports the view of Gangeṣa.

here. He adds 'just as the organ of touch, present in the eye-ball or the visual organ, gives us the knowledge of smoke when the latter

comes in contact with that sense-organ, similarly, the organ of touch apprehends loudness, etc., belonging to air when the air comes in contact with that organ.'²

Again, a question comes in: if it is due to the organ of touch that dullness, loudness, etc., belonging to air are cognised, then, if the skin, that is, the

Further Gangeṣa holds that even the auditory organ can apprehend the qualities of air just as the visual organ and Manas apprehend the qualities of earth.

touch sensation, present in the ear-cavity, be destroyed by leprosy, etc., there will be no apprehension of these qualities. The answer is that then we can say that even the auditory organ itself can apprehend these qualities of air; for we see that the organs of

visual perception and Manas being non-earthly organs (apārthivendriya) can very well apprehend the qualities of the earth. Similarly, the organ of hearing, not being an airy organ, can very well cognise the qualities of air.³

As regards the question of imposition, it is said that it is an obvious instance of imposition, just like the imposition of 'fair complexion' as expressed in the judgment—I am of fair complexion. Hence it is clear that sound cannot be a substance, as accepted by the Mīmāṃsakas.⁴

The imposition, as criticised by the Mīmāṃsakas, is accepted by the Naiyāyikas.

But there is another objection. It has been said above that sound is not a substance because it inheres in a single

¹ Cintāmaṇi, Ābda-Khaṇḍa. Published in the Pandit, Vol. VI, Old Series, 1872, page 282, col. 2¹⁵⁻¹⁸.

² Rucidatta's Com. on the above. Published in the Pandit.

³ Cintāmaṇi, Ābda-Khaṇḍa, Pandit Ed., p. 283, col. 1²; and Rucidatta's Com. on the above.

⁴ Nyāyalilāvati, p. 76¹.

substance. Although this reason can disprove its being a sub-

Objection
sound can be an
action on the
ground that it
resides in a sin-
gle substance

stance, but it can very well, on the other hand, prove that sound is an action (karman). To this also the Naiyāyikas give an answer that it cannot be so, for all actions are objects of

Answer to the
above objection

perception by the organ of vision while sound is never perceived by the eye. Moreover, an

action does not produce a similar action, while sound does produce a similar sound. Again, action is found to exist in substances having colour while sound does not exist in such a substance.¹

Similarly, it can be proved that sound cannot be either the Generality (Sāmānyā), or the Inherence (Samavāya), or the

Sound cannot
be either the
Generality or
the Inherence or
the Viçepa or the
Abhiva.

Viśeṣa.¹ For these categories do not possess a generality which sound does possess it. It cannot also be included under the seventh category—*Abhāva*—Non-existence, for sound

has a positive character

Thus by the method of exhaustion sound is proved to be a quality. Cālikanūtha Mīcra, a Mīmāṃsaka, also supports the

Click and the
Micro—a Mi
micraka—a p
ports the view
that sound is a
quality
sound is a
Vijaya guna

Naiyāyika-view and says that which is perceived by a single sense-organ is a quality, sound is cognised by a single organ of sense, that is, the auditory organ, hence it is a quality like colour, etc.* It is not only an ordinary

quality but a specific one."

¹ Candrakānta's Bhaṣya on Vai. Sū., II 2 24 p 116⁷⁻⁹ Guja
rātī Press Ed

Jayanīrāyaṇa a Vivṛta on Val. Sū. II 2 24

Bibliotheca Indica Ed and Bodhini on the above p. 75³⁰

* () Prakaraṇapañcika p. 145¹⁴⁻¹⁵

(u) Nyāyamuktāvalī pp 84¹¹—85¹ Vindheçvarī Prasād s Ed., Benares

(i) Kiranaval, p 106¹³⁻¹⁶ Vindhya, Prasad & Ed Be-

(11) सय बन्धो एउ सय स्रेष्ठ शक्ति हो ।

(ii) Bhāṣāpariccheda, verses 90 and 91

The Vaiyākaraṇas hold sound as a quality also

We have seen above that the Vaiyākaraṇas hold sound as a substance, but as it inheres in the Ākāśa—a substance, it is also

a quality.¹

The question here is : if sound is a quality, it must have a substratum to inhere in, and that substratum can but be a substance.² Now what that substance can be ?

What is the substratum of sound ?

As sound is a specific quality (Viśeṣa-guṇa) it cannot have Dik, Kāla, and Manas as its substratum ; for these do not possess any specific quality ; and also because sound is cognised by the auditory organ, while no quality belonging to Dik, Kāla and Manas is apprehended by the organ of hearing. Nor can it be the specific quality of the

Sound is not a specific quality of Dik, Kāla, Manas and Ātman

Ātman, because sound is apprehended by an external sense-organ unlike the specific qualities of the Ātman, just like colour which also is not a quality of the Ātman ; and moreover, sound can be known by another self, that is, it can be heard by more than one self ; it does not inhere in the Ātman, nor is it ever cognised together with the Ego (ahaṁkāra) as it is found in judgments expressed in forms like 'I am happy,' 'I am feeling pain,' etc. ; for all the qualities of the Ātman have a common substratum along with the Ego.

Similarly, it is proved that it is not a quality of either earth, or water, or air or fire. The reasons are : It cannot be a specific quality like Touch (sparśa) for being perceived (pratyakṣatvāt) ; it does not inherit the qualities of its cause ; it does not exist as long as its substratum exists ; and it is to be found

Sound is not a quality either of earth, or water, or air, or fire.

¹ Vide Mañjūśā, p. 218.

² (i) Nyāyamuktāvalī, p. 85 ¹⁻². Vindh. Ed.

(ii) Indian Logic and Atomism—by Dr. Keith, pp. 229-230.

in places other than its substratum.¹ Hence it is proved by the method of exhaustion that sound is a specific quality of Ākāṣa.

V VARIOUS OTHER VIEWS ABOUT SOUND

'Sound is a quality of Ākāṣa. It is all-pervading and eternal, and it is liable to manifestation only.'² This view is held by an old Mīmāṃsaka. According to this view,

Sound is an all-pervading and eternal quality of Ākāṣa. It is only manifested—Jaraṇaiyāyika view

the air-waves set in motion by the impact move forward, until they reach the tympanum and manifest the sound already subsisting in the Ākāṣa inclosed in the ear-cavity.³

On the other hand, the Tāntric School holds that the ultimate principle is God Īva and as Īhda-Brahman inheres in it, Īhda becomes a quality

Sound is a quality—the Tāntric School.

The Sāṃkhya and the Vedāntins hold that sound is manifested and inheres in earth, water fire and air and not in Ākāṣa

The Sāṃkhya along with the Vedāntins hold that sound does not inhere in the Ākāṣa but in earth, in water, in fire and also in air along with and in the same manner as odour, colour, etc., and is liable to manifestation

only.⁴ Vācaspati Miśra explains it further. He says according to this view, sound subsists in all such substances as the cow, jar, etc., being a modification of the earth and other elemental substances, each of whom is the aggregato product of the subtle

¹ (i) Nyāyamuktāvali pp 83-86

(ii) I raṣastapāda Bhāṣya, p 58⁸⁻¹⁴ Vizianagram Sanskrit Series Ed

(iii) Kandalī on the above

(iv) Kiraṇavalī, pp 106-110

* Nyāya Bhāṣya, II 2 13

* Tātparyatikā, p 370¹⁷⁻¹⁹ Vizianagram Series Ed.

* (i) Nyāya Bhāṣya on II 2. 13 Vizianagram Series Ed

(ii) Nyāyakoṣa, p 788 Foot note

elements produced out of the five Tanmātrās; and also being a modification of Abhāṁkāra, it is all-pervading; so that when the sound happens to appear in a suitable place, it modifies the auditory organ that happens to be close by and thus sound is apprehended.¹

Another Sāṁkhya view is that it is of the nature of the three guṇas.

There is also another view attributed to the Sāṁkhya that sound is of the nature of the three guṇas—Sattva, Rajas, and Tamas.²

There is another view held by the Svātantras that sound is produced in the drum, lute, etc., and as these are earthly objects, sound inheres in earth only.³ Raghudeva Nyāyālan-

The Svātantras hold that sound is a quality of the drum, etc., and hence inheres in the earth only.

kāra in his commentary on the Padārthattvanirūpaṇa or Padārthakhaṇḍana, as it is generally called, by Raghunātha Ācārya, mentions this view as 'Pare tu' that is, 'others,

on the other hand.' There he says that according to them sound is the quality of the drum, etc., and it is also supported by the usual usage—sound is (produced) in the drum. In other words, the material cause of sound is the drum.⁴ Now a question arises: if the drum be the material cause, then its product—the sound of the drum—should continue to remain as long as the drum exists; for the destruction of the drum is the cause of the destruction of the specific qualities of the drum. To this Rāmabhadra Sārvabhauma, in his commentary—the Padārthattva-Vivecanaprakāśa on the Padārthakhaṇḍana of Raghunātha Ācārya, says that this objection is not tenable; for the sound of the drum will be destroyed by

¹ Tātparyāṅkā, pp. 307²⁷⁻²⁸-308¹.

² Śloka Vārttika, adhi. 6, verse 319, p. 811, Benares Ed.

³ (i) Dinakari and Rāmarudrī on Nyāyamuktāvalī on Bhāṣā-pariccheda, verse 44, p. 370, Myslapore Ed.

(ii) Siddhāntacandrodaya by Ācārya Dhūrjati Dīkṣita, quoted in the Nyāyakośa, p. 788, Foot-note, Second Ed.

⁴ Raghudeva's Com. on the Padārthakhaṇḍana, p. 7²¹⁻²⁵. Reprint from the Pandit.

which constitute the sound or the word. These letters are eternal and have no succession. This eternal object is known as *Sphoṭa*. Although this *Sphoṭa* is one and eternal, yet like the lower generalities of cowness, horseness, jarness, etc., it assumes various forms due to different upādhis (conditions) as in the *Nāda*. This *Nāda* has succession; and if not then there will be a great confusion in deriving meaning from the sound; for instance, there will be no difference, if succession is not observed, between the words *dīna* and *nadī*. But it should be noted that this *Nāda* is not capable of bringing out any clear meaning. It is only helpful to lead us up to the *Sphoṭa* which really has the 'meaning.' This is also clear from the very meaning of the word *Sphoṭa*—'from which a meaning comes out.' There exists the relation of *implier* (*abhivyañjaka*) and the *implied* (*abhivyanjya*) between the *Nāda* and the *Sphoṭa*. The former is the *implier* while the latter is the *implied*. This Ultimate Principle is the *Çabda-Brahman* of the *Vaiyākaraṇas* wherein inheres the qualities.

The various forms or sub-divisions of *Sphoṭa*, due to different upādhis, referred to above, are: *Varṇa-Sphoṭa*; *Pada-Sphoṭa*;

Varieties of *Sphoṭa*. *Vākya-Sphoṭa*; *Akhaṇḍa-Pada-Sphoṭa*; *Akhaṇḍa-Vākya-Sphoṭa*; *Varṇa-Jāti-Sphoṭa*; *Pada-Jāti-Sphoṭa*; and *Vākya-Jāti-Sphoṭa*.

Kuṇḍa's view on the varieties of *Sphoṭa*.

But the *Vaiyākaraṇas* do not accept the validity of these except that of the *Vākya-Sphoṭa*.¹

Nāgeṣa's view on the *Sphoṭa*

Nāgeṣa Bhaṭṭa points out that the *Sphoṭa* is the *Nāda*-aspect of the *Madhyamā Vāk*.²

¹ *Vaiyākaraṇabhūṣaṇa*, ch. on *Sphoṭa-Nirūpaṇa*, p. 295, Benares Ed.

² (i) *Māñjūṣā*, p. 183³⁻⁴.

(ii) *Positive Sciences of the Hindus* by Dr. Seal, p. 153, para. 1, 1915 Ed.

(iii) गद्यस्य व्यञ्जका एव न स्युः अपाव्यवेनोत्पादकानां निश्चय इति सादृश्यात्तरवेनाप्यवसीदमानाः श्रोतुः पुनः पुनः श्रोत्रप्रदेशे गच्छन्ती व्यक्तिस्रोतरूपं जातिरस्रोतरूपं वा गच्छन्निव्यञ्जयन्तीत्यर्थः—*Pradīpa*.

Naiyāyikas
do not accept
Sphoṭa Theory

It will not be out of point to mention here that the Naiyāyikas do not accept this Sphoṭa theory of the Vaiyākaranas¹

In the Çukla-Yajuh-Prātiçākhyā it is said that sound is identical with air, that is, sound is the quality of air and as there

Sound is identified with air—Çukla Yajuh Prātiçākhyā view

is no distinction between a quality and the qualified, sound is described as *that*, that is, the air itself. The process is that by the effort of the person within himself the air manifests itself as sound² in the form of 'ka,' etc.³

The process of sound production is somewhat different in the Sangītaratnākara. It is said there—when the Atman

Sound is the manifestation of air is the view of the Sangītaratnākara.

desires to speak, it moves the Manas, which in its turn inflames the fire of the body and that fire moves the air, which remains in the *Brahmagranthi*,⁴ and it moves up and manifests itself as sound in the navel, heart, larynx, cranium, and mouth.⁵ Thus according to the Sangītaratnākara

¹ Upaśāstra on Vā. Sū., II 221

² (i) उद्बतान्—उद्बतान् (Ubbata Bhāṣya) उद्बतान् एव वाक्—Çukla-Yajuh Prātiçākhyā I 7 9 उद्बतान् एव वाक्—Ubbata Bhāṣya on Sūtra 13 Ibid Benares Ed

(ii) वाक् एव वाक् एव वाक् एव वाक् एव वाक्

न वाक् एव वाक् एव वाक् एव वाक्

वाक् एव वाक् एव वाक् एव वाक्

Com on the Vākya in Mañjūśā and in the Foot-note on the Yajuh Prātiçākhyā, I 8

(iii) वाक् एव वाक् एव वाक् एव वाक्—Vākya, I 108 Mañjūśā, p 184

(iv) वाक् एव वाक् एव वाक् एव वाक्

वाक् एव वाक् एव वाक् एव वाक्—Vākya, I 109

³ वाक् एव वाक् एव वाक् एव वाक्

वाक् एव वाक् एव वाक् एव वाक्—Vākya, I 110

⁴ Caturakalīnīthas Com on the Sangītaratnākara, ch I verse 1, Ānandāçrama Ed

⁵ वाक् एव वाक् एव वाक् एव वाक्

वाक् एव वाक् एव वाक् एव वाक्

वाक् एव वाक् एव वाक् एव वाक्

वाक् एव वाक् एव वाक् एव वाक्

verses 3-4

representing the Science of Music, sound is the manifestation of air. Pāṇinīya-Çikṣā also holds nearly the same view.¹

Effort of Īṣvara makes vibration appear in the form of Sound

Some again hold that Īṣvara by His Second Will (Saṅkalpa) turns Himself into Eternal Vacuum (chidra) and that becomes Ākāṣa. In

that Ākāṣa by another Effort of Īṣvara there appears, together with the velocity of air, a vibration in the form of sound.²

A similar idea is held by the Vedāntins. They are of opinion that from Brahman in the form of Ākāṣa a subtle air, otherwise known as *Sparṣa-Tanmātrā*, comes out. It possesses a quality, through its cause, namely, sound and also the touch sensation.³

A similar view is held by the Vedānta that sound is a form of subtle air

Again, some identify sound with atoms. It is said that these sound-atoms,⁴ because of their various capacities, possess the state (Vṛtti) of producing various effects by their multifarious combinations, and inherent potency being manifested by efforts, the sound-atoms collect together and appear as sound in which form it appears before us; just as small pieces of clouds collecting together appear as cloud in the sky.⁵

¹ Vide Supra, Foot-note 2 (ii). This view has been criticised by Çālikanātha in his Prakaraṇapañcikā, p. 163²², etc.

² (i) Durbalācārya's Com. on Mañjūṣā, p. 184¹⁵⁻¹⁸.

(ii) तस्मिन् द्विरे अन्तर लक्ष्म्या बाधोऽङ्गैः—Harivaṃśa, quoted by Durbalācārya on Mañjūṣā, p. 184.

³ (i) Durbalācārya's Com. on Mañjūṣā, p. 184²¹⁻²³,

(ii) Vide Mahābhāṣya on Sūtra साध्यातोषधौ and Pradīpa thereon.

⁴ Nāgeṣa means by atom (अणु) here the अणुतन्मात्रपरमाणु—Mañjūṣā, p. 184⁷⁻⁸.

⁵ (i) अथवा संप्रगच्छितात् भेदनसर्गद्वयः ।

साध्यातपतमः शब्दभावेन परिमाणिनः ॥

स्वगच्छी व्यञ्जमानाया प्रवर्तनेन समीरिताः ।

अभागीय प्रयोगवन्ते शब्दाद्या. परमाणवः ॥—Vākyapadīya, I, 111-112.

Again, sound, which has as its seat the Prāṇa and the Buddhi (Intellect), being manifested by the potencies of Prāṇa and Buddhi, makes the meaning clear. It appears as non-eternal sound in various forms due to the variety of the manifesting places.¹

Another view is that the entire universe, that is, the objects of the universe have for their support the sound. That is, it is the Çakti (energy) of the sound (wherein inheres the entire universe in its subtlest form) which manifests itself and appears as different kinds of objects. Thus it comes to this : whatever is perceived is Vāk; whatever is uttered is Vāk; the sound itself is the universe in its manifold appearance.²

Some are of opinion, specially the followers of the Navya School of Nyāya, that Īçvara, instead of being an instrumental (nimitta) cause of sound, is the material (Sama-vāyi) cause. Here by Īçvara they mean Paramātman and not Jīvātman; for in the first place, there is no proof to say so; even

¹ तस्य प्राये च या शक्तिर्वा च बुद्धौ व्यवस्थिता ।
विवर्तमाना स्वाप्तेषु सेवा भेद प्रपद्यते—*Ibid.*, I. 118, and *vide* also Puṇya
rāja's Com. on it.

² (i) शब्देन्नेवाग्रिता शक्तिर्विश्वस्यास्य निवन्धिना ।
यत्रैतः प्रतिभात्मायं भेदरूपः प्रतीयते—*Vākya*, I. 119.
(ii) वागेव प्रकृतिः परा—*Tai. Samhitā*, 6. 4. 7. 3, quoted in the Foot-
note of the *Mahābhāṣya*, pp. 805-806, Bibliotheca Ed.
(iii) वागेवायं पश्यति वाग् व्रजेति वागेवायं समिहितं सन्तनोति ।
वाचैव विद्युं बहुरूपं निरुद्धं तदेतदेन प्रविभक्त्योपभुङ्क्ते—quoted by Puṇyarāja
in his Com. on *Vākya*, I. 119.

शब्दस्य परितोभोभनिरयाम्नायविदो विदुः ।
ब्रह्मोभ्य एव प्रयननेतद्विद्यं व्यवर्तते—*Ibid.*, I. 121, and 130—133 along
with Puṇyarāja's Com.

(iv) वागेव विश्वा भुवनानि जज्ञे वाच एतत्सर्वमनृत यच्च नरयंश्च—*R̥gveda*, quoted in
Ibid.

(v) विभज्य बहुधात्मान एव ब्रह्मन्दस्यः प्रजापतिः ।

ब्रह्मोभ्योभिर्नात्राभिर्व्यहृषीय विविश तम् ॥

शान्दी वाग् भूयमेयेषु पुरुषेषु व्यवस्थिता ॥—quoted in Puṇyarāja's Com.
on *Vākya*, I. 121.

then if it be urged, then it can be said that just as Jivātman being the material cause of pleasure and pain, we say 'I am happy,' etc., similarly, we would have to say 'I possess sound.' Again, like pleasure, pain, desire, etc., sound also will be apprehended by the instrumentality of the Manas. That is to say, even when the ear-cavity be destroyed, sound will be heard, but this seems to be against the reality. They go even so far as to say that the ear-cavity is not different from Īśvara under a certain limitation.¹ This view makes sound one of the attributes of Īśvara.

It can be suggested that sound is a quality of Dik, for, as supported by Kumārila Bhaṭṭa and others, according to the Vedas, the auditory organ is described to be a limited Dik. Now the organ of hearing, as a limited Dik, apprehends sound, which is its quality. Dik being all-pervading and eternal like the Ākāśa, there will be no difficulty in the production or manifestation of sound anywhere.²

This view has been criticised by Jayanta Bhaṭṭa. He says that it is a great self-conceit to consider Dik as an ear-cavity, and moreover, the organs of sense are being proved material (bhautika) while Dik being an incorporeal substance (amūrta), can

Sound is a quality of Dik as the ear-cavity is identified with it

Jayanta Bhaṭṭa's criticism of the above

¹ (i) Padārthatattvanirūpaṇa, dp 3—10 Reprint from the Pandit

(ii) Dinakar, Rāmarudra and Prabha on the Nyāya muktāvali on the Bhāṣyāpariccheda stanza 41 p 370 Mysapore Ed

(iii) Nyāyakośa p 819

² (i) श्री गणेशाय नमः—श्री गणेशाय नमः । श्री गणेशाय नमः । श्री गणेशाय नमः ।
verses 150—154 quoted by Jayanta Bhaṭṭa also in the Nyāyamān-jari p 226

(ii) श्री गणेशाय नमः—श्री गणेशाय नमः । श्री गणेशाय नमः । श्री गणेशाय नमः ।
p 26 Reprint from the Pandit

(iii) Bhāṭṭa Cintāmaṇi p 11 and श्री गणेशाय नमः । श्री गणेशाय नमः । श्री गणेशाय नमः ।
Ibid p 20¹⁷

never be an organ of sense. And again, the Vedic Text which is the basis of this view, occurs in a different context and means quite a different thing. Thus the Çruti says, "may the eye go to the Sun, the ear to the Dik, and the vital-air to the Antarikṣa." Here the vital-air, although of the nature of air, is said to go to the Antarikṣa with which the vital-air is not connected. Therefore, even if it is said that the ear may go to the Dik, it cannot be said that the Dik is the ear-cavity.¹

These are the various views about sound. They have been criticised by different schools from their own point of view.² The prominent leaders of the views are: the Mīmāṃsakas, the Vaiyākaraṇas and the Naiyāyikas.

VI. THE ETERNITY AND NON-ETERNITY OF SOUND.

Having discussed the place of sound under the various categories according to the multifarious views, we now proceed to discuss another important aspect of it, that is, whether sound is eternal or non-eternal.

As before the Mīmāṃsakas of both the schools—Bhaṭṭa and Prabhākara—take a very prominent part here also. Çālikanātha Miçra following Prabhākara's view says, if sound were destroyed just after its production, it would be impossible to determine the true natural connotation of the words, on the basis of the use of the experienced people; but as a matter of fact we know the meaning of the words by marking their repeated use among the old people. This fact would be inexplicable if we were to accept the non-

Prabhākara is of opinion that without the eternity of sound knowledge is impossible

¹ दिवां कारान्तराज्ञेपादानान्यपरवतः ।

आहोतु रूपिकानां दिग्द्वयस्रोतस्त्वयम्, etc.—Nyāyamañjarī, p. 226⁹⁻¹⁰.

² Jayanta Bhaṭṭa summarises the views, he has criticised, in a fine couplet: निद्याविदस्तु पदनात्मकमेव शब्दनाशवत्ते तदवयवमवयवमतीतिः ।

अद्वैतमतप्रवित्तु दृग्गन्तव्यं दृग्गन्तव्यं च वाच्यवयवमपि वाच्यवयवः, etc.—Nyāyamañjarī, p. 217.

eternal character of sound. For instance, each time the word will appear a quite new one, as if it has been uttered for the first time and never before, and will give no sense (to a man who is ignorant of the meaning of the word), and until the words afford any meaning, they cannot be regarded as a means of right knowledge. Therefore, if a man wishes to establish the *pramāṇya* of words, that is, if he thinks to carry on his usage by having words as a means of right knowledge, the eternity of sound must be accepted, as it has to fulfil some purpose.¹

Further it is urged that it must be eternal, because its pronouncement is made for the sake of conveying certain thoughts to another and this will be impossible if sound were not eternal, for it would not continue till the hearer, for whom it is meant, understands the meaning.² Again, the above view is supported by their being everywhere simultaneousness in the recognition of it by so many hearers. For example, when the word cow is uttered, many persons recognise the word and it is applied to all cows simultaneously.³ Then again it is said that by the absence of number, sound is proved eternal, for example, when the word 'cow' is uttered eight times, we say, 'the word cow is uttered eight times' but not 'eight words of the form cow are uttered'.⁴ Moreover, there is another reason to support the view. We do not find any cause to destroy it, as we find in the case of a cloth. That is, as soon as we see a new cloth, we

Ideas can never be interchanged if sound were non-eternal

Simultaneity of cognition of words also supports the above view

Absence of number in the sound proves its eternal character

No cause is found to destroy sound

¹ (i) *Prakaranapāñcikā* ch IX, p 161 '12

(ii) *Prabhākara School of Purva Mimāṃsā* p 58

Jaiminiya Sūtra and Chāndogya Bhāṣya I 1 18 Chowkh Ed

² *Ibid* I 1 19

³ *Ibid* I 1 20

feel assured that it will be destroyed because it has a colour and also because it, being produced by the conjunction of threads, will be destroyed as soon as that conjunction or the thread itself

is destroyed.¹ Finally, to put the seal upon the evidence of sound's eternity Çabara quotes a Çruti also to this effect.²

Besides these the Mīmāṃsakas of the Prabhākara School say that 'sound is eternal, because it inheres in the Ākāṣa

only, just as the dimension of the Ākāṣa'; or 'because of the force of a Recognition (Pratyabhijñā) in the form—it is the very letter 'ga' which was uttered by Rāma yesterday, and is being uttered by Çyāma to-day.' There exists a perfect identity between the two sounds. On the other hand, the Bhaṭṭa School says, 'it is eternal, because it is a substance which does not melt, or which has no touch, like the Ātman.'³

Some more arguments in favour of sound's eternity by Ānandabhaṭṭa and Prabhākara.

It is not only that the Mīmāṃsakas are in favour of the eternity of sound but the School of Vyākaraṇa also supports it.

It holds that letters are eternal, because they are *dhvanya* letters, like Sphoṭa. Taittirīya Saṁhitā also holds the same view. It says

that there are two kinds of Çabda: One is a product which is used for our ordinary usages and the other is the fount of all such usages, devoid of succession and so on.⁴

Then there remains the question—If the word is eternal, why is it not always present in our consciousness? The answer to this is: though the word is ever present, yet, in order that it may be cognised by us, it stands in need of a certain

¹ Ibid., I. 1. 21.

² Ibid., I. 1. 23. The Çruti runs thus—वाचं विदुषन्निदमेति.

³ (i) Nyāyalīlāvatī, p. 75 ¹⁷. (ii) Nyāyasiddhāntamañjarī of Jānakīnātha, quoted in the Nyāyakoṣa, p. 792.

⁴ Taittirīya Saṁhitā, 6. 4. 7. 3, quoted in the Foot-note of the Mahābhāṣya, pp. 805-806, Bibliotheca Indica Ed.

auxiliary agency that manifests it, or makes it cognisable, or presents it to our consciousness.¹ This manifestive agency consists of the effort put forth by the man who pronounces the word. The Naiyāyikas regard this effort as the *Cause* of the word, bringing it into existence, but Prabhākara regards it as a *force or agency*² that serves to manifest to our perception the word that is already in existence. And as these efforts may be many, there need be no incongruity in the same word being pronounced and heard by several people, wherever the manifestive agency is present, the word will be heard, if there are many men putting forth an effort for pronouncing a word, it is only natural that there should be manifestations of the word in consciousness, that it is the same word that is cognised in each of these cases is proved by our direct cognition of all of them as one and the same, and thus is another reason for regarding sound as eternal.³

From what we have said it is clear that there is not only one sound but many. But Uddyotakara introduces a quite different view held by the old Mīmāṃsakas.⁴ They hold, says Uddyotakara, that there is only one sound. To this Uddyotakara replies that in that case every sound should be heard by

¹ Nyāya Bhāṣya II 2 32-34.

² (i) दृष्टव्यमनसो ज्ञानमस्ति न अन्यत्—Cāstrad pika I 1 6 50 Nirayasaṅgāra Ed

(ii) निवृत्तमनसो ज्ञानमस्ति न अन्यत्—Cābara Bhāṣya, I 1 6 and 12

³ (i) Prabhākara School of Purva Mīmāṃsā, p 59¹⁻²²

(ii) Vide Prakaraṇapāṭikā, pp 162 163

(iii) Cābara Bhāṣya I 1 13 and 15

For other references of this Section vide Jaiminiya Sutra and Cābara Bhāṣya, I 1 6-26 Cāstrad pika on the above Nyāyamañjarī pp 203-209 Cioka Vārttika—the whole of the 6th Adhikaraṇa Nyāyasūtra with Vātsyāyana Bhāṣya, II 2 13-34 Vaiṣeṣika Sutra with the Commentaries, II 2 23-37

⁴ Vide Tātparyāṅkā, p 310¹

all persons. To this again; the Mīmāṃsakas say, what we mean is this—that 'we do not hold that every sound produces a number of other sounds, but that there is only one sound and it pervades over the entire Ākāṣa, like its dimension;¹ and this sound is heard only when it is manifested by the Conjunction and Disjunction, just as a jar, etc., placed in a room is apprehended, when manifested by the Conjunction of the lamp-light.' This is also rejected by the Naiyāyikas on the ground that if it were so then every sound should be heard by all men. They go on saying that even if the Mīmāṃsakas mean that a single sound, pervading over the entire Ākāṣa, becomes manifested by Conjunction and thus brings about the cognitions of the thing (expressed by that sound) to the person possessing the auditory organ, there will be the same difficulty that every sound thus manifested will bring about cognition to all persons having the organ of hearing. But this does not actually happen; therefore, the arguments of the Mīmāṃsakas are merely fanciful.²

There are several views regarding the manifestation of sound. Some hold that air is the manifestor. That is, when air-current reaches the Ākāṣa in the form of our ear-cavity, the sound, subsisting in it, becomes manifested and thereby becomes audible.³ Some, again, are of opinion that the manifestor of sound is not air or air-currents, but a particular quality belonging to air called *Nāda*.⁴ The third view seems to be that sound is manifested by

Views about
the manifesta-
tion of sound.

¹ 'Tātparyatikā, p. 310¹⁷.

² Nyāya-Vārttika, pp. 286²⁷—287¹. The view that there is only one sound was also anticipated by Padmanābha Miśra—*vide* Kiraṇāvalī-Bhāskara, p. 132⁴⁻⁵.

³ Nyāya-Vārttika, p. 289³⁻⁵, Benares Ed.

⁴ Ibid., p. 289²¹⁻²².

the Conjunction and Disjunction of *an* ¹ All these views have been criticised by Uddyotakara and Vācaspati Miśra.²

According to the Naiyāyikas and others, on the other hand, sound is non-eternal, because it has a cause (*ādā*), because

Some of the arguments in favour of the non-eternity of sound by the Naiyāyikas and others

it is apprehended through a sense organ, and because it is conceived and spoken of as a product.³ Moreover, we find there is a difference of property between sound and things that are eternal. The most obvious reason for

this seems to be this—that sound is subject to destruction while eternal things are not so. Again, it cannot be taken to be eternal on the ground that it is not caused but is manifested, for the manifestation will entail a defect. The defect will arise that in each case an invariable relation of the revealer and the revealed will have to be admitted in respect of things co-existent and capable of being perceived by the same sense. But the invariable relationship of the revealer and the revealed is nowhere observed of such things. If it be not assumed here, then it will follow that on the manifestation of one letter, say, 'Ka,' all the letters will become manifest. The rejoinder that an invariable relation of the revealer and the revealed is in fact observed to obtain among the characteristic of being existent, the characteristic of being a man, and the characteristic of being a Brāhman, which are also co-extensive and are revealed by their individual difference, situation and origin, is invalid. For they lack in being co-extensive inasmuch as the extension of the characteristic of being a man, or of the characteristic of being a Brāhman, is not so large as that of the characteristic of being existent.⁴

¹ Nyāya Vārtika p. 298 22-23

² Ibid p. 289 and Tātparyatīkā, p. 312²⁻¹³ Vizianagram Sans. Series Ed.

³ Nyāya Sūtra, II 2 13

⁴ (i) Upaskāra (from the trans. of Nandakī Sinha) on the Vai Sū., II 2 30

Further it can be argued that sound is a product, for in the case of it, we see that the effort is made to utter a sound.¹ Again, sound is non-eternal because it

Sound is non-eternal for an effort is made to utter it.

possesses transitoriness, for beyond a moment, it is no longer perceived.² Moreover, we

find that there is an uncontradicted usage in the form 'make a sound,' 'do not make a sound (noise),' etc.

It is supported by an uncontradicted usage—'make a sound.'

This making of sound shows that it is non-eternal like anything, which is thus an object

of making.³ Again, we see that a sound is simultaneously heard in various places. This fact becomes impossible if there

Also because it is heard simultaneously in many places

be only one eternal sound. An eternal entity without any special characteristic (Viṣeṣa) cannot possess this sort of maniness; while on

the other hand, we find that a product can find place simultaneously in many places.⁴ Lastly, we see that sound is non-

It has non-eternal character is also proved by the fact that there is an augmentation of it.

eternal because by a multitude of utterers of sound there is an augmentation of it. This cannot be the case of manifestation, for in that case, there should be no difference in the

manifested thing, whether there be many manifesters or a single manifesters; while it is clear here that every man out of a multitude produces only a part of sound and thus the effort of the entire multitude makes one complete sound.⁵

There are other proofs also to justify sound's non-eternal character. The Naiyāyikas go on saying that there is no

It is so, as it has the qualities of production and distinction.

proof to prove its eternity; and moreover, it possesses the qualities of production and destruction, which are quite antagonistic to its

(ii) Nyāya-Kusumañjali-Bodhinī, p. 65. Sarasvatī-Bhavana Text Series, Benares Ed.

¹ Jaiminiya Sūtra and Ćabara Bhāṣya, I. 1. 6.

² Ibid., I. 1. 7.

³ Ibid., I. 1. 8.

⁴ Ibid., I. 1. 9.

⁵ Ibid., I. 1. 11.

being eternal. Moreover, it has a cause and that which has a cause cannot be eternal.¹ This we cannot deny, argue the Nuyāyikas, on the ground that it is not produced but is only manifested by certain manifesters, for if it has a manifesters, why all the words are not manifested at the same moment? For we know that a single revealer (abbhivyāyaka) manifests it a time all such things which co-exist and are perceivable by the same organ of sense, just as we see that a jar, a cloth, a table, etc., which are the objects of perception through the same sense-organ become manifested when brought before a light, which is the single revealer. So is the case with the words and letters. And again, it can be said that sound, being the specific quality of Ākāśa which is everywhere present, must be found to appear everywhere, whenever it is manifested in a place.² And moreover, the argument brought forward by the Mīmāṃsakas is vitiated with the fallacy of *Sādhyaigītha*

The inherent
quality of
sound shows that
it is non-eter-
nal

(Sādhyaigīthāvadavṛtti, i.e., that Hetu is known as such which exists where the Sādhya—the thing to be proved—is absent) That sound possesses the qualities of loudness and dullness also shows that it cannot be eternal, for these inherent qualities are of contrary characters and as such must have different substratum.³

These are the arguments in support of the two views. We must bear in mind that the Mīmāṃsakas have to support the most vital problem of their philosophy—the *self-sufficiency of the Veda*, by proving the eternity of sound. The reason is that if sound were non-eternal, the validity of the word and the verbal cognition would be, not something inherent in the word itself, but due to the trustworthy character of the person pronouncing the word, and thus as the Mīmāṃsakas

Necessity of
sound's eternity
for the Mīmā-
sakas

¹ Vas Śū Mīm II 2, 28 Gujarati Press Ltd
Tātparyatīkā p 310 13-20

² Ibid pp 312 313

It will not be out of place to mention here the view of one of the greatest Naiyāyikas—Udayanācārya—upon this view of the Vedas. He says that when we

the Mīmāṃsakas. He says that when we have proved that words are not immaculate self-sufficient entities, we can regard the Veda as the 'word of a reliable person,' and hence

VII. OTHER CHARACTERISTICS OF SOUND.

¹ (i) Prabhakara School of Pūrva Mīmāṃsā p. 55 ¹⁵⁹ —56 ¹⁻¹³.

(ii) Dr. Ballantyne's "The Eternity of Sound"—the Pandit,

Vol. I, Old Series, p. 70.

५ वदनाच्चरंशस्यसु सुविनामत्सुदनामत्तत्तिन्दुः । वेदनाप्यविविदिः । अथवा अर्थावयवत्वात्
 (वेदनात्तु) वदनाप्यवदः । अथैवमिति सप्तमविधिपदविधिः । अथवा अर्थावयवत्वात्
 वदनाच्चरंशस्यसु सुविनामत्सुदनामत्तत्तिन्दुः । वेदनाप्यविविदिः । अथवा अर्थावयवत्वात्

11-1-33¹⁻², Mr. Hunt by Dr. Jha. *vide* also Foot Note of Dr. Jha's Translation of the *Nyāya Bhāṣya* and *Vārttika* Vol. II, p. 317.

immediate result (drataphah) is also found to issue from the
 Utility of repetition of certain sounds, namely, mantras,
 sound which help, for instance, in retarding the
 circulation of poison in case of snake-bites, etc., and the invi-
 sible result is said to follow from certain vows (Sañkalpa).¹
 This sort of vow is infallible and effective, if the person
 making the vow really possesses higher spiritual powers.²
 Not only this, but the orthodox opinion is that if a
 single word is thoroughly understood and correctly used, it
 will fulfil all the desires of the person knowing and using it,
 in this world as well as in the world hereafter.³

For the sake of thorough apprehension of the characteristics
 of sound, we have summed them up here. Sound is heard
 summary of not only on the spot where it is produced,
 the various but even farther off. It is because of this that
 characteristics of sound, there appears a difference between far and
 near sounds.⁴ It does not extend over the whole of its
 substratum nor does it exist after it has reached the ear.⁵ It
 is a quality inherent in a substance having no limitation.⁶
 It is to be apprehended by an external sense-organ.⁷ It is
 momentary in character.⁸ Some are of opinion that it
 exists for two moments only,⁹ while others say that it
 remains for three moments. Sound is produced in that Ākāśa
 only where air is present.¹⁰ The Mīmāṃsakas suggest that it
 is all-pervading.¹¹

¹ Vakyapadīya, I 140

² Consult Bhavabhūti's Uttaracarita—अथवा पुनरुक्तानां वाचनमेषामुच्यते

I *ide* १४. ४०० अथवा पुनरुक्तानां वाचनमेषामुच्यते ।

⁴ Praçastapāda Bhāṣya, p. 58 Vizianagram Sans. Series Ed

(i) Kirañāvali, p. 138 Vindhyeshwar, Prasad's Benares Ed

(ii) Praçastapāda Bhāṣya and Kandaḥ, p. 102

Ibid., p. 9, 10

⁷ Ibid. p. 96, 11

⁸ Ibid. p. 278¹

⁹ Padārtha Dipikā of Kunda Bhatta, p. 39

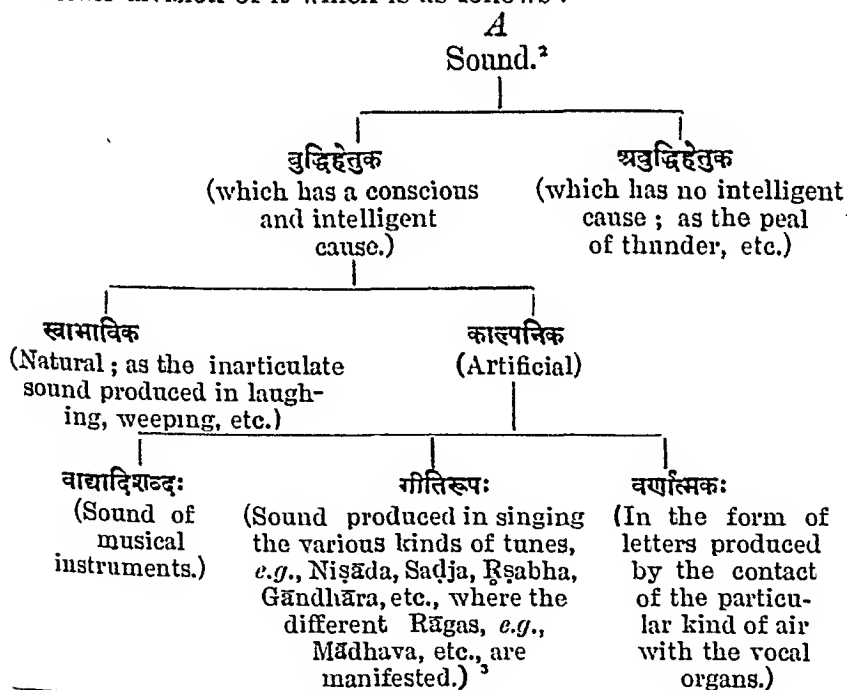
¹⁰ Kirañāvali, p. 139

¹¹ Padārthadipikā, p. 39

Although sound is a specific quality of Ākāṣa, it has some similarity with the category of Karman (action). Both of these exist in a single substance and have short duration. But as regards the latter, it is held that Karman exists for *four moments* and is destroyed in the fifth, while sound remains only for *two moments* and is destroyed in the third. But Keçava Miçra is of opinion that sound, like Karman and Buddhi, exists for three moments.¹

VIII. SUB-DIVISIONS OF SOUND.

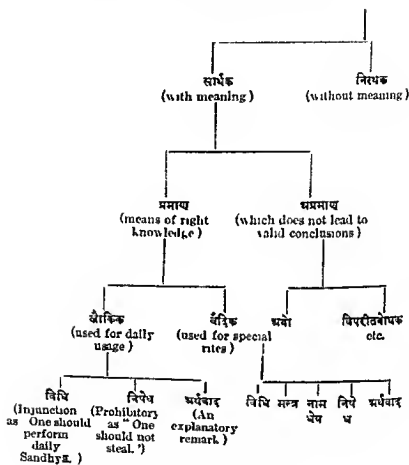
Having thus discussed the nature of sound we now proceed to point out its sub-divisions and varieties. Even here we find multifarious opinions. In the Vācaspatya we find an elaborate division of it which is as follows :



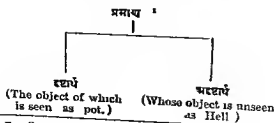
¹ Tarkabhāṣā, p. 138⁷⁻⁸. Reprint from the Pandit 1901 Ed.

² Nyāyakoṣa, pp. 788-789 ; Tarkasangraha Notes, edited by Bodaṣ and Athaley, Bombay Sanskrit Series Ed., p. 171.

³ Nyāyakoṣa, Foot-note under Āruti, pages 817-818.

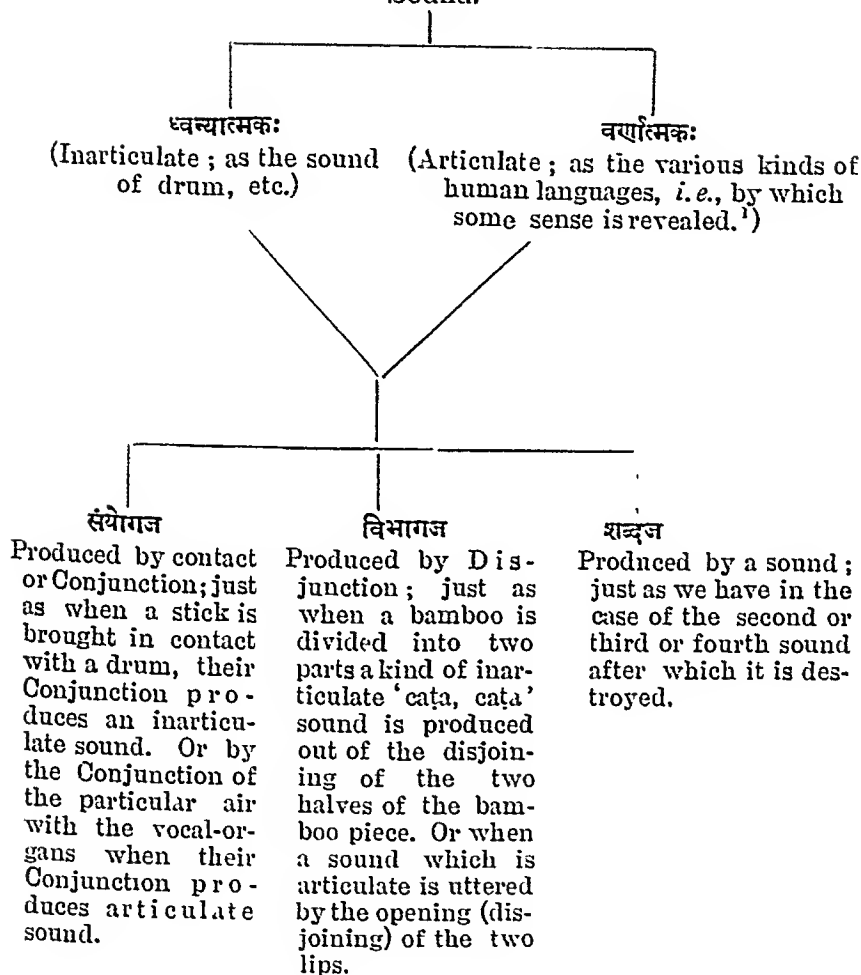


Or this प्रमाण may be again sub-divided as follows —



¹ Nyāya Sūtra, I 1.8

B.
Sound.



IX. PRODUCTION AND PROPAGATION OF SOUND.

We have seen above that sound is either articulate or inarticulate. According to this division, there is difference in its production and propagation also. As for the articulate sound the process is this—from the contact of the Manas with the Ātman influenced by the remembrance of the letter-sounds heard before, there arises a

¹ Nyāya Bhāṣya, I. 1.3., p. 10*, Viz. Sans. Series Ed.

desire to pronounce similar sound, then follows the effort on the part of the man, and by the instrumentality of this effort (which serves as the instrumental cause) as effecting the contact of the Ātman and Vāyu (which contact serves as the *asamavāyi-kāraṇa*), there is produced a certain action or motion in the Vāyu within the abdomen (*Kausthya-Vāyu*), and thus air moving upwards strikes such sound-producing points in the body as the heart, the larynx, the palate, etc., then by the instrumentality of the contact of the Vāyu with these points, as effecting the contact of Ākāṣa with the points (which serves as the *asamavāyi-kāraṇa*) there is produced the articulate sound.

As for the other, when the stick strikes the drum, the force of the stroke effecting the contact of the drum and the *Ākāṣa*, the sound is produced from this contact, where the contact of the drum and the *Ākāṣa* serves as the *asamavāyi-kāraṇa*, the drumstick-contact and the force of the stick serve as the instrumental cause.¹

Sound is also produced by Disjunction (*vibhāga*), as in the splitting of bamboo joints and by the disjunction of *Ākāṣa* and the bamboo. Again it is produced from sound itself. This is fully described in the process of the propagation of sound.

Generally there are two views as regards the propagation of sound to our ears. They are sometimes mutually confused. According to the *Kandaḷi*, when a sound is produced by conjunctions and disjunctions in the aforesaid manner, there appears a regular series of sound waves as it were, that is to say, just as ripple of water gives rise to another ripple in immediate contact with itself, and so on and on, there appear a regular series of ripples,

¹ *Praçastapāda Bhāṣya* along with the *Kandaḷi* (and *Kiraṇaḥ* val.) pp 283 289

in the same manner when one sound has been produced, it produces another sound in close contact with itself, and so on and on a regular continuous series of sound-ripples are produced; this is known as the *Viçitaranga-Nyāya*. And when the line of ripples (Santāna) reaches the ear, the last unit of the series reaching it, comes to be apprehended by the ear.¹ That is to say, neither the first, nor the middle sound is ever heard but always the last sound is heard.²

According to Viçvanātha, the author of *Nyāyamuktāvalī*, and also according to its commentary the *Prabhā* sound

Process of propagation of sound on the analogy of water-waves

is brought to our ear by the wind. When a sound is produced in the drum, etc., it proceeds in all directions but more swiftly in the direction in which the wind is blowing,

just like the waves which when produced proceed in all the sides, but more swiftly towards the wind-direction. The process is also clearly given in the *Vivṛtti* on the *Vaiṣeṣika Sūtras* by *Jayanārāyaṇa*.³ The first sound, produced by the Stick-drum contact, produces another single all-pervading (*sarvadigavacchedena*) sound, which again produces a similar third sound and so on and on till it reaches our ear and is apprehended there. This is known as the production of sound like *water-waves*.

On the other hand, the other theory is that when a sound is produced in the drum, etc., that first sound, in its turn, produces ten such distinct sounds moving towards all the ten

Propagation of sound on the analogy of Kadamba-filaments

directions; and these ten sounds in their turn produce another series of ten sounds and so on and on until they reach the tympanum of

our ears and are apprehended; just as the first Kadamba filament produces around it, that is, in all the sides, similar filaments, and those filaments again in the very substratum,

¹ Kandali, p. 289, *Vizianagram Sans. Series*, Benares Ed.

² *Tarkabhāṣā*, p. 137 5-6.

³ *Vai. Sū. Vivṛtti*, II. 2. 37.

produce similar filaments in all the directions. This is known as the process of producing and propagation of sound like *Kadamba-bud*. As this theory involves a long and tedious process, Viśvanātha rejects it in favour of the former theory,¹ but Uddyotakara rejects the former in favour of the second.²

The difference
between the
two theories

to the former only one and all-pervading sound is produced at every time, while according to the second theory ten distinct sounds are pro-

duced at every time

Whatever interpretation be correct, it is true that sound is produced and is carried away in all the directions, and it is, therefore, that the same sound appears to be heard by people living on all the sides. If an obstacle, like wall, etc., comes in the way of these sound-waves, the air which carries it, is stopped and does not proceed further. Thus the last sound does not produce any more sound and consequently sound is not heard at a great distance.³

Now the question is what is the necessity of these wave theories? Ācārya in his *Kundali* supplies an answer to this.

Necessity of
wave theories
for the propa-
gation of sound

As a matter of fact, he says, we find that the ear—the receiver of the sound—does not go up to the place where the sound is produced, nor does the sound produced in one place go up to the ear, as both of these, namely, the sound and the ear, are immobile (*niskriya*), the one because it is *Ākāśa* itself and the other because it is a quality, and unless there is a contact, no apprehension is possible. Nor could we explain the perception of sound in any other manner, and in the case of waves we actually find that though the first ripple is itself destroyed, it produces another in

¹ *Nyāyamuktavali* and *Prabhā* on *Bhāṣya* (pariccheda, verse 106) *Mylapore Ed.*

² *Positive Sciences of the Hindus* p. 107

³ *Ānāṇḍarāhasya*, pp. 27-28

close proximity to itself and so on and on producing a regular series of waves, it finally reaches a distant point; and from this analogy we assume a similar series of sound-waves.

Nor would there be any *regressus ad infinitum* in this case, as the sound-waves would continue only so far as they could be carried by the air of the abdomen set in motion by the sound-producing effort. It is for this reason when a sound is produced against the direction of the wind it is not heard very far; the reason for this is that the air proceeding from the mouth is opposed and stopped by the contrary wind.¹

A question can be raised: what is the necessity of these two theories? Viṣvakarman in his commentary on the Tarkabhāṣā explains the point. He says—according to the Viṣṭaranga-Nyāya it is not possible for a sound produced on a lower surface, to travel up to a higher level, or to proceed in all the directions so that a man standing on a higher surface or in other directions, will never be able to hear the sound; hence it is necessary to take the help of the other theory to explain such cases.²

Necessity of
the two theories
of propagation

Now if this argument be accepted, it can be said that there is no necessity for the water-wave theory; for only by the help of the Kadambamukula-Nyāya it will be possible to explain the propagation of sound in all the directions.

Suggestion for
accepting the
Kadambamukula
theory only.

From what we have seen above, we understand that there is a necessary relation between the hearing of sound and the air. We know that the Naiyāyikas do not accept the views set forth by some of the schools that sound is the quality

¹ (i) Kandalī, p. 289.

(ii) Kiranāvalī-Bhāskara, p. 130⁵⁻⁶.

² Nyāya-Pradīpa on Tarkabhāṣā, p. 83¹⁸⁻²¹. Reprint from the Pandit, 1901.

of air or air itself,¹ but according to them it is the specific quality of Ākāśa which itself is motionless.² It appears, therefore, that if there be no air or air-waves to help the sound, it is impossible to hear any sound, because unless there is the object-sense-organ-contact, no perceptual knowledge (Pratyakṣa) is possible, and further because the particular sense-organ (e.g., the auditory organ) is Aprāpyakārī—that is, which does not go up to the object. So has said Udayanācārya that as far as the air is in conjunction with the Ākāśa, there is produced sound and is nowhere else, for otherwise, the perceptions like 'there is sound in the east,' 'there is sound in the west,' etc., cannot be had.³ Thus clearly shows that if a drum be struck or a bell be rung in a place, from which air has been pumped out, no sound will be heard.

Sound cannot be produced in a place where there is no air

We have seen above that the auditory organ, unlike the ocular organ, apprehends its objects in its own place and not in the place where its object of knowledge is produced.⁴ The process involved in hearing is the same as we find in other kinds of direct perceptions. In other words, when the sound is brought to the ear by air-currents, then first of all it comes in contact with the sense-organ—the auditory organ, and then that sensation is carried to the Manas—the inner sense-organ, which in its turn, takes the sensation to the Ātman, wherein

Process of apprehension of sound according to the Naiyāyikas.

¹ चाक्षी वायुना वायुं न च कश्चित्—Cloka-Vārtika चाक्षरेव तादात्म्येनानुसंधेयान् वायुना वायुना विपद्यते इत्येवमिति वायुना वायुं वेदितव्यम्—Pārthasārathi Miśra's Nyaya rainākara, quoted by Dr Seal in his Positive Sciences of the Hindus, p 153

² न तावत् वायव्यमालम्ब्य गृह्यतु विधानि—Taittvavindu of Vācaspati Miśra quoted by Dr Seal

³ वायुनि सन्ने भवन्वायव्यं तादात्म्येन वायुं वेदते वायव्यमालम्ब्य गृह्यतु विधानि—Kirapāval, p 139³⁻⁵ Benares Ed

⁴ Kirapāval, Bhāṣakara p 130⁵⁻⁶

consciousness inheres, and that Ātma-Manas-contact brings out the apprehension of sound.

But there is another view as to the apprehension of sound.

Process of apprehension according to almost all the Buddhists.

Jayanta Bhaṭṭa says that there is almost a Bauddha view (Cākyapṛāyas) which holds that neither the sound goes to the ear, nor the latter to the sound, but the organ of hearing by

its peculiar capacity apprehends the sound. Jayanta criticises this view that if it were so, there is no ground why the sound produced at a very great distance or that which has good many obstacles in the way, is not heard.¹

Jayanta's criticism of the above view.

Here a question naturally arises: how are we to know the direction from which sound proceeds? The answer is supplied

Naiyāyika's view of knowing the direction from which sound proceeds

by Uddyotakara and Vācaspati Miśra. They hold that sound proceeds from such sources as the drum, the conch-shell, palate and the like. A certain definite part of the auditory organ lies towards that source. When the first

sound produced happens to be produced in that part of the auditory organ, we infer that the sound has proceeded from a source located in a particular direction. That is to say, when a sound-series, emanating from the drum kept in a particular direction, produces a sound in the auditory organ, a particular peculiarity of sound is apprehended. Through the help of this peculiar characteristic, it is inferred that the sound is coming from the source existing in a particular direction.²

Some, on the other hand, are of opinion that we do not get any notion of direction as regards sounds; and the reason is that notions of direction arise only when the object from which the sound proceeds is visible to the eye; for, persons born

Another view about it, which is not accepted by the Naiyāyikas.

¹ Nyāyamañjarī, p. 216 13-15.

² Nyāya-Vārttika, pp. 291-292; and Tātparyatīkā, p. 315¹⁴⁻¹⁹

blind have no knowledge of direction either of the east or of the west¹ Vācaspati Miśra adds here that such persons can with great difficulty make out the direction of sound—produced in their front, or behind their back or on the two sides only²

Having studied the origin of sound and its nature, and the mode of its propagation, we now propose to take up the question of its destruction. The process of destruction

Destruction
process of sound
and views about
its duration

may be thus described. It is said that when a sound is produced, its production takes place in the first moment, it exists in the second

and in the third it is destroyed. The first sound is destroyed by the second one, this again by the third and so on. The last sound (i.e., the sound which reaches the ear) on destroying the one immediately before it, destroys itself. This is how

Keçava Miśra has dealt with the question in his *Tarkabhāṣā*³

But Kaunda Bhaṭṭa holds that sound exists for two moments only, for we do not hear it after a moment. The sound of the first moment

is destroyed by its own product—another sound, which destroys the first sound in the second moment after its (first sound's) production. Thus all sorts of sound exist for two moments. But as regards the last sound, some are of

opinion that it is destroyed by its own cause—the preceding sound like the simile of *Sunda* and *Upasunda*, and hence it exists for one moment only. The process of the destruction of the last sound and the sound previous to it

Some on the
other hand, hold
that the last
sound exists for
one moment
only

¹ एते तु कुर्वन्ते नैव शब्दे दिग्दिग्मादयः कल्पिताः । कुतः ? अमुदिपयद्विद्वादि दिग्दिग्मादयः । तथाहि जायन्त्याय वृत्तिपट्टमिदमकं शब्दे न कल्पितं — *Nyāya-Vārttika*, p. 292¹⁴⁻¹⁶

अद्विदि जायन्त्यायवदि शब्देन निरुद्धास्तथायतनं शब्दविशेषः शब्दकल्पितं तथाहि वृत्तिपट्टदिग्दिग्मादयो कल्पिताः — *Tātparyāṭkā*, p. 315²⁶⁻²⁷

² *Tarkabhāṣā*, p. 138

is so simultaneous that practically the last sound may be said to exist for a moment only. Some again hold that the last sound also exists for two moments and is destroyed by the sound which destroys the immediately preceding sound.

The Navyas, as pointed out by Kaunḍa Bhaṭṭa, however, hold that the destruction of the *Nimitta*, that is, the contact with the air (*Nimitta-Vāyu-Saṁyoga*) destroys the sound. Thus the process is: first of all there is the contact of the air, then follow the destruction of the previous action and the production of the sound. Then in the first moment there is the action (*kriyā*); in the second, separation from the previous space (*pūrva-deṣa-vibhāga*); in the third, the contact between the air and the sound is destroyed; and in the fourth, the sound itself is destroyed. Thus it is said, taking into consideration the destruction itself, sound exists for four moments.¹

A question is raised: if sound exists only for a few minutes, how is it possible to apprehend the meaning of a sentence, the pronunciation of which implies a large number of sound? To this the answer is: When a man hears a particular sound, a kind of disposition is produced in his *Ātman*, which remains impressed therein even when the sound is destroyed and no longer heard. When the second sound, which follows it, in immediate succession, is heard, the hearing implies the working up of the disposition consequent upon the first hearing. This process is carried on until the last sound is apprehended. From this it is evident that although each sound stands by itself, and is in reality isolated from similar other sounds preceding and succeeding it, the apprehension of meaning, which involves a sort of synthesis or order in the sounds, is possible.

¹ Padārthadīpikā, p. 39. 6-15. Reprint from the Pandit, 1900.

For the co-operation of the previous dispositions, which co-exist and come upon the threshold of perceptual knowledge of the hearing of the last sound, renders the meaning of the sentence possible.¹

P S —

There appears to be a view that there are only three kinds of Vāk²—Paçyantī,³ Madhyamā,⁴ and Vākharī.⁵ These varieties are also denied by some who hold that there is, truly speaking, only one well-known Vāk called Vākharī,⁶ while Madhyamā⁷ is nothing but intellect which discloses the internal-feeling (antah-saṁkalpa) and hence it cannot be called one of the varieties of Vāk, as for Paçyantī,⁸ it is only a synonym for the Nirvikalpaka-jñāna,⁹ and a form of cognition can never be called a Vāk.

¹ Tarkabhāṣā p 72 73

² Vide Nyāyamañjarī, p 373¹⁻²

³ वा गु प्राचयेद्व्यादिर्हितव्यादिर्विदुषा वाक् एव भवन्ती—Ibid., p 374¹

⁴ वा बुधवत्त गच्छन्त्यनामकवशा योऽप्यवयवकषाभिप्यतिरहित वाक् एव भवति—Ibid. p 374²⁻⁴

⁵ (i) एव वक्तावयववत्तत्वेन वक्तावयवकषादिवचनमुदाहरितक वा वाक् एव ईक्षते—Ibid., p 373²⁻³

(ii) It is so called because it is produced in the amalgamation of the body and the sense organs (देहिन्द्रियव्याप्त) च विहर एति देहिन्द्रियव्याप्त उच्यते तत्र भवति ईक्षते—Ibid., p 373²⁻³

Alaṅkāra-kauṣṭubha describes the four kinds of Vāk thus —

बुधव्याप्तत मयवबुद्धिर्निव बन्तु तार परास्व

वक्तावयववत्तव बुधवयो बुद्धिबुधव्याप्तः ।

वक्ते वेद्यवयव वद्विषयेस्व भवन्ती बुधव्या-

बुधव्याप्तोऽप्यवति वक्तावेति विदुषा ॥—Ibid. hiraṇa 1

⁴ Vide Nyāyamañjarī p 386¹⁻²

⁵ ज्ञान बुधवयो भवन्ती वक्तावयव वाक् वेद बुधव्याप्तो विदुषा भवेत् ।

बुद्धिर्बुधवयव वक्तावेति विदुषा बुधव्याप्तो वद्विषयेस्व भवन्ती—Ibid p 386¹⁻²

वक्तावेति गु विदुषावयववत्तव्याप्तवत् वद्विषये

विदुषावयव विदुषावयववत्तव्याप्तवत् वद्विषये

वक्तावेति बुधव्याप्तवत्तव्याप्तवत् वद्विषये

वद्विषये विदुषावयववत्तव्याप्तवत् वद्विषये ॥—Ibid., p 386²⁻³

⁶ The first stage of cognition in Nyāya Vaiśeṣika

THE WORD SALÁT AS USED IN THE KORAN

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The introduction of new and uncommon phraseology is the inevitable consequence of all inventions and introductions of new ideas and things. Such also was the case with the introduction of Islam in Arabia; and it is an indisputable fact that with the advent of Islam—or better, the Koran—the Arabic vocabulary was very considerably enhanced and enlarged, and thus became far richer than it was before. To be more precise, for the introduction of the new dispensation it was found necessary to express a good many ideas that were totally new to the ears of the Arabs. And this could not be achieved but by the employment of equally new and unheard-of phraseology, which would have naturally sounded strange and astounding to their ears. The word *Rahmán* is perhaps the finest example of such introductions, which puzzled the hearers of the Arabian Prophet. The Koran records the interesting event of the Arabs questioning the new preacher what *Rahmán* was. Here is the exact verse:—

وَإِذَا قِيلَ لَهُمْ اسْجُدُوا لِلرَّحْمَنِ ۖ قَالُوا وَمَا الرَّحْمَانُ؟

This led to a further question : *انسجدلما نأمرنا ؟* and the natural consequence was *وزادهم نفوراً*. The Prophet defined *Rahmán* thus : *تبارك الذي جعل في السماء بروجا وجعل فيها سراجا منيراً ، وهو الذي جعل الليل والنهار خلفاً لمن اراد ان يذكر و اراد شكوراً*

The following fifteen verses then define the *عباد الرحمن* (creatures of Al-Rahmán) This epithet occurs in no less than fifty other verses, of which three lay still more emphasis on the recognition of "the Rahmán" is the true God. I mean simply to show that there are words in the Koran that have necessitated a repeated affirmation and a detailed expression

Such words and phrases admit of a fairly long list and SALAT is one of them. I do not mean to assert that it is any fresh discovery. But I cannot help thinking that there has been a constant disregard shown (and I may say, and injustice done) to a better and more correct understanding of this word. The matter invites a closer and more serious study than has hitherto been accorded to it. For, although the learned commentators of the Koran seem to have tried their best to come to a good and sensible explanation of this word wherever it occurs, yet they seem to have gone confused over the matter and have not been able to follow their own idea clearly. To come directly to the point, they (and I dare say, all of them) unanimously regard the word *Salat* as being of pure Arabic origin. There is, however, one verse where all of them do, for a moment, agree that the word does not form a part of the Arabic vocabulary, but comes from the sister-language, Hebrew.¹ And that is because they could not help doing so, as that particular verse (to which I will have the occasion to refer later on) does not, cannot, admit of any other interpretation.

Below I quote all the verses containing the word *Salat* (with all its derivative forms) as found in the successive order of the Koranic chapters —

- 1 *وَيَقِيمُونَ الصَّلَاةَ*—II, 1, IX, 71
- 2 *وَأَسْرُوا الصَّلَاةَ*—II, 43, 83, 110, IV, 77, X, 86, XXIV, 56, XXX, 30, LXXIII, 20

¹ See

3. واستعينوا بالصبر والصلوة —II, 44, 153.
4. اولئك عليهم صلوات من ربهم —II, 156.
5. و اقام الصلوة —II, 177 ; IX, 18.
6. حافظوا علي الصلوات } —II, 236.
7. والصلوة الوسطي }
8. واقاموا الصلوة —II, 275 ; VII, 170 ; IX, 11, 18 ;
XIII, 20 ; XXXV, 18, 29 ;
XLII, 37.
9. وهؤلاء يصلي في المكرب —III, 38.
10. لانقربوا الصلوة وانتم سكارى
11. فاقمت لهم الصلوة } —IV, 101.
12. فليصلوا معك }
12. ان تقصروا من الصلوة —IV, 101.
13. فاذا اطمأنتم فاقموا الصلوة —IV, 102.
14. فاذا قصيتم الصلوة —IV, 102.
15. ان الصلوة كانت علي المؤمنين } —IV, 102.
16. كتابا موقوتا }
16. واذا قاموا الي الصلاة —IV, 142.
17. والمقيمين الصلوة —IV, 162.
18. اذا قمت الي الصلوة —V, 6.
19. لئن اقمتم الصلوة —V, 12.
20. ليقومون الصلوة —V, 55 ; XXVII, 1.
21. ويصدكم عن ذكر الله وعن الصلوة —V, 91.
22. تحبسونهما من بعد الصلوة —V, 106.
23. وان اقيموا الصلوة —VI, 70.
24. وهم علي صلواتهم يكانطون —VI, 93.
25. ان صلاتي ونسكي —VI, 166.
26. الذين يقيمون الصلوة —VIII, 2.
27. ما كان صلاتهم عند البيت } —VIII, 36.
28. الامكاه وقصدية }

- 28 IX, 54 — لا يأتون الصلوة الا وهم كسالى
- 29 IX, 84 — لاتصل علي احد منهم
- 30 IX, 99 — وصلوات الرسول
- 31 وصل عليهم } IX, 103
- 32 ان صلاتك سكن لهم
- 33 XI, 87 — اصلبتك تمارك
- 34 XI, 114 — واقم الصلوة طرقي الميثار
- 35 XIV, 31 — الدين آمنوا يقيموا الصلوة
- 36 XIV, 37 — ربنا ليقيموا الصلوة
- 37 XIV, 40 — رب اجعلني مقيم الصلوة
- 38 XVII, 78 — اقم الصلوة لذك الشمس
- 39 XVII, 110 — ولا تحجر مصلاتك
- 40 XIX, 32 — واراضي بالصلوة
- 41 XIX, 55 — كان يامر اهله بالصلوة
- 42 XIX, 58 — خلف اضاءوا الصلوة
- 43 XX, 15 — وادم الصلوة لذكري
- 44 XX, 132 — وامر اهلك بالصلوة
- 45 XXI, 75, XXIV, 35 — واقام الصلوة وابتاء الركوة
- 46 XXII, 34 — والمقيمى الصلوة
- 47 XXII, 41 — لهدمت صوامع وبيع وصلوات
- 48 XXII, 40 — واقاموا الصلوة وآتوا الركوة
- 49 XXII, 78, LVIII, 13 — فابعدوا الصلوة وآتوا الركوة
- 50 XXIII, 1 — الدين هم في صلواتهم حاشعون
- 51 الدين هم علي صلواتهم } XXIII, 3, LXX, 34
- يكانظون
- 52 XXIV, 41 — كل قد علم صلواته وتسبيحه
- 53 XXIV, 57 — من قبل صلوة الفجر
- 54 XXIV, 57 — ومن بعد صلوة العشاء
- 55 واقم الصلوة } XXIX, 45
- 56 ان الصلوة تمهي عن العشاء
- والفكر

57. يا بني اقم الصلوة—XXXI, 17.
 58. واقمن الصلوة—XXXIII, 33.
 59. هو الذي يصلي عليكم وملائكته—XXXIII, 42.
 60. ان الله وملائكته يصلون } —XXXIII, 56.
 علي النبي
 61. يا ايها الذين آمنوا صلوا عليه—XXXIII, 56.
 62. اذانودي للصلوة من يوم الجمعة—LXII, 9.
 63. فاذا قضيت الصلوة فانتشروا—LXII, 10.
 64. الذين هم علي صلاتهم دائمون—LXX, 24.
 65. قالوا الم نك من المصلين—LXXIV, 47.
 66. فلا صدق ولا صلي—LXXV, 31.
 67. ونكر اسم ربه فصلى—LXXXVII, 15.
 68. الذي ينهي عبداً اذا صلى—LXLVI, 10.
 69. ويقيموا الصلوة—LXLVIII, 5.
 70. فويل للمصلين } —CVII, 4, 5.
 71. الذين هم عن صلاتهم ساهون }

This is an exhaustive list of all the contexts containing the word *صلوة* in its various forms. As far as the external form of the word is concerned, even a cursory study of this list suggests the following issues:—

1. Of the 114 Chapters of the Koran, only 36 contain references to *Salât*.

2. The majority of these chapters are Meccan in origin. In fact they are double the number of the Medinite chapters—24 Meccan as against 12 Medinite ones.

3. (a) In its basic Noun form (Substantive, or Quasi-Infinitive, as Lane calls it) the word is written in two ways, *viz.*, (i) *صلوة* with the long vowel *á* of the *Lám* expressed in the form of a *Wáv* (و), and (ii) as simple *Alif* (الف) in the form *صلاة*.

(b) The only plural form used is *صلوات*—the regular feminine plural.

4 For its derivative form only II (تَعْيِيل) has been adopted, and the only derived forms used are —

- (i) Preterite, Third Person, Masculine Singular صَلَّى
- (ii) Aorist, Third Person, Masculine, Singular نَصَلَّى
with its Pl يَصَلُّونَ
- (iii) Imperative, Masc. Sing. صَلِّ with its Pl صَلُّوا
- (iv) Negative, Imp, Sing, لَا تَصَلِّ
- (v) Noun Agent, Masc, Pl مُصَلِّينَ

5 Leaving aside the derived forms of the word (as shown in 4 above) the pure Substantive form (صَلَاة) appears in connection with the following assertions and commandments only —

إقامة الصلاة - إقامة
لعل - قيام إلى الصلاة - استعانة ب -
الخطب على - قرب - قضاء - القصيرين - الحسن بعد - الصدق
عن - اتيان - الكهف - الامر ب - اذاعة - هدم - حشوع في -
علم - نهى الصلاة عن الحساء - الداء ل - الدوام على - السهو عن -
الصلاة على ملائ

It has already been said that the word *Salāt* is not of pure Arabic origin. It is one of those which constitute a sufficiently long list of foreign words employed by the Koran to make the whole produce the effect and force of a "clear language" (لِسَانٌ مُبِينٌ) strong and forcible enough to express and bring home to the minds of the readers and hearers the real force of the ideas that are so subtle, so searching and so catholic,—ideas that embody the last message of God to His creatures, ideas that propose to accomplish the establishment of a world-wide brotherhood based on the best mutual understanding and communion of acts and feelings of the son of man throughout the length and breadth of our planet. It is clear at the very outset that the word was wholly foreign to the

difference in the locality of publication (e.g., India, Egypt, Persia, Turkey, etc.)—shows a marked difference in the treatment of the words in this mode of writing. But then, the other side is also true, *viz.*, many of the foreign words have also been written in the ordinary Arabic way (with an usual *alif*). This may be due, partly, to sheer negligence and oversight, and partly, to the ignorance of the early scribes and of those responsible for the writing, or to carelessness on the part of the later and more modern copyists. For a comparison of the later copies of the Book with the old Mss. of it does certainly offer many more foreign words written in this "defective" mode of expressing the long vowel *Alif*. At any rate, this is an established fact that foreign words have been so treated, and there should be no difficulty in accepting this as a proof of the foreign origin of the word *Salât*.

In this connection, particular attention should be drawn to —

(i) the foreign names *يحيى* and *موسى* written as *يحيى* and *موسى* and

(ii) the words *حياة* and *ركاة* written as *ركوة* and *حيوة*

These are instances of the words of foreign origin. The expression of *alif* in terms of *ي* in (i) and of *و* in (ii) shows clearly that the original forms of the words must (and does) contain the letters *ي* and *و* in the spelling of these words originally. The three words in (ii) show that *صلوة* is not a solitary example of such words used in the Koran, and a reference to the Aramaic and Chaldean lexicon brings out the fact that the original Aramaic form of these words was *ركوتا* and *حيوتا*. Under the same category falls the word *Salât*, which was originally *Seletâ* in Aramaic. In fact all the leading lexicographers of the Arabic language have recognised the fact—with the exception, however, that they call it Hebrew

(see above) and not Aramaic. Ibn Manzur, the leading lexicographer of Arabic, says:—

¹ وصلوات اليهود كنائسهم وفى التنزيل لهدمت صوامع وبيع وصلوات ومساجد. قال ابن عباس هي كنائس اليهود، أى مواضع الصلوات، وأصلها بالعبرانية صلونا، وقرأت صلوت.

This suggestion of the second reading of the word as Sulot (صلوت) is also significant. He goes on to say:—
وقيل إنها مواضع صلوات الصابئين وقبل معناه لهدمت مواضع الصلوات..... وقيل الصلاة بيب لأهل الكتاب يصلون فيه.

The author of Al-Qamus has:—

² والصلوات كنائس اليهود، أصله بالعبرانية صلونا

The learned Rāghib Al-Isfahānī writes:—

³ ويسمى موضع العبادة الصلاة؛ ولذلك سميت الكنائس صلوات، كقوله لهدمت صوامع.....

Likewise Abul-Baqá:—

⁴ وصلوات ومساجد: فإن المراد الأماكن.

And again, explaining the letter *wāw* in the word:—

⁵ وأصل الصلاة صلوة بالتحريك، قلبت واوها الفالتحريكها واعتلح ما قبلها: فصارت صلاة نلفظ بالالف ونكتب بالواو، والاشارة إلى الأصل المذكور، وانباعا للرسم العثماني مثل الزكوة والحيوة والربو.

The author of *مجمع البكرين* observes:—

⁶ قوله لهدمت صوامع وبيع وصلوات، قيل هي كنائس اليهود، وسميت الكنيسة صلوة لأنها يصلى فيها

¹ Lisanul-Arab., Cairo, Vol. XIX, p. 198.

² Vol. II, p. 952.

³ Al-Mufradat fi Gharibil-Quran, p. 287.

⁴ Al-Kulliyat, p. 396.

⁵ Ibid., p. 403. This also shows that this mode of writing (with *wāw* and not with *alif*) dates from the time of the third Caliph, 'Usmān, and is, therefore, the earliest script.

⁶ He is نجم الدين طريغ النجفي (G. 1000). The *مجمع*—Ed. Teheran, p. 52.

This may suffice for the lexicographers. The exegesis also agree on this point while explaining the verses —

(a) 'لهدمت صوامع وبيع وصلوات ومساحد' and

(b) 'لا تقربوا الصلوة وانتم سكارى'

Zamakhsharī says on (b) —

معناه لا تقربوا مواضعها، وعلى المساحد

and this is amplified by a tradition of the Prophet, immediately following the above statement, thus —

كقوله عليه السلام "حرموا مساحدكم صيانكم ومكانينكم"
وماك من مسالوة فالمسجد، معناه لا تقربوا المسجد

and on verse (a) —

'وسميت الكنيسة صلوة لانها يصلي فيها' وقيل هي كلمة معربة
اصلها بالعبادة صلواتا

Abu Jafar 'Tusi, explaining (a) says —

'والصلوات وصلوات كنيسة اليهود عن امي مسلم وقال ابن عباس
والصالحات وقادة الصلوات كائنات لليهود، يسمونها صلوات، نعربت
and quotes the other readings —

'ومرر دعفر بن محمد وصلوات تضم الصاد واللام، وقراء الكندي
والكلبي وصلوات تضم الصاد وتفتح اللام

On (b) he has —

'لا تقربوا اماكن الصلوة اي المساحد

and then goes on —

الصلوة وعبره كقوله وصلوات، اي مواضع الصلوات عن عبد الله
وسعيد بن المسيب والصالحات وعكرمة والحسن ومحمد بن عبد الله الا عابري
سبل، فان العبر انما يكون في الموضع دون الصلاة

¹ Kor XXII 41.

² Kor IV, 43

³ التكملة في حقائق التنزيل — Vol I pp 291 92

⁴ Ibid., Vol II, p 909

⁵ مجمع البيان في تفسير القرآن — Ed Teheran Vol II p 140.

Ibid p. 139

⁶ The Majma — Ed Teheran Vol I p 241

Suyúti¹ explains both these verses likewise.

The author of *الصافي* on (a):—

² 'صلوات' اي وكما تسمى اليهود قبل سميت بها لانها تصلي فيها وقيل اصلها تلونا بالاء المنلثة بالعبودية، بمعنى المصلي، فعربت. وفي المجمع عن الصادق انه قرء صلوات بضم الصاد واللام. and on (b):—

³ لا تقربوا الصلوة وانتم سكارى، لانتم سكارى لانتم سكارى من كونهم او خمر. وقد نهى الله عز وجل ان تقوموا الى الصلوة وانتم سكارى... والعياشي عن الباقر والقمي عن الصادق الكاظم والجنب لا يدخلون المسجد الا مكبرين..... قال ومنى الآية الكريمة قد استخدم سبحانه لفظ الصلوة بمعنىين: احدهما اقامة الصلوة بقرينة قوله عز وجل حتى تعلموا ما تقولون والآخر موضع الصلوة بمعنىة قوله ولا حياء الا عابري سبيل. اقول هذا الصواب، وهو الموافق لما روينا من الاخبار في هذا الباب..... بان المراد بالصلوة في صدر هذه الآية مواضعها وهي المساجد.....

The learned *المهاتمي*⁴ also agrees with al-Muhassin in both the places. So also the author of *بحار الانوار*.⁵

In commenting on (a) the great Tabarí quotes the authorities of (i) ابو عبيد بن عبد الله (ii) الكسن بن يحيى (iii) عبد الله بن عباس (iv) عبيد الله بن موسى (v) احمد بن حازم and ابراهيم from المتنى (vi) الكسن and سعيد from ابن بشار (vii) حماد بن ابراهيم and سعيد بن حبير —and all of them agree that the sense of the word Salát in

¹ —Ed. Delhi, pp. 74, 93, 281. الجالين

² He is مرقي محمد بن معروف known as الحسن (C. 911). In *الصافي* —Ed. Teheran, p. 330.

³ Ibid., p. 108.

⁴ علي بن احمد بن ابراهيم بن اسماعيل d. 835. In his commentary entitled *تفسير الرحمان وتفسير المنان ببعض ما يشير الي اعجاز القرآن* —Ed. Cairo, Vol. I, pp. 65, 150, and Vol. II, p. 47.

⁵ By محمد ابراهيم الهندي d. 986 —Ed. Lucknow, pp. 259—265.

⁶ Tabarí's great work *جامع البيان في تفسير القرآن* —Ed. Cairo, Vol. V, p. 59.

this verse is that of a Masjid (mosque) While with reference to (b) he admits the original "Hebrew" form to be Salótá. Says he —

‘اما معني مواضع الصلوات اما معني صلوات وهي كنائس اليهود
تدعي بالعبرانية صلوتا واولى هذه الاموال في ذلك بالصواب قول من
قال ذلك ليهذب صوامع الرهبان ويضع النصارى وصلوات اليهود
هي كنائسهم

Even the great philosopher-exegesist, Fakhruddin al-Rāzi, quotes ابن عباس and ابن مسعود to explain Salát as Masjid,² and accepts the original form being Salótá.³ So also do al-Suyuti,⁴ al-Bayzawī,⁵ al-Shurbīnī,⁶ Sayyid Muḥammad,⁷ Fīzi,⁸ Siddiq Hasan Khan⁹ and a host of others.

The Arabic lexicographers and exegists have, however, tried their best to find out in Arabic origin for the word. Failing to find any other derivative form except صلي they have laboured in vain to prove its connection with صلاة and صلوات. To quote only a few of them Al-Raghib al-Lisānī derives it from صلاة and justifies it by saying —

‘ومعني صلي الرجل أي انه اراد عن نفسه بهذه العبادة لصلاة الذي
هو نار الله الموقدة

² Ibid Vol XVII p 114

³ لغز الدين محمد بن عبد الرزاق (التفسير الكبير) known as معاني الدين —Ed. Cairo Vol III p 231

⁴ Ibid Vol VI pp 187 188

⁵ الاكلبي انتخاب التنزيل —Ed. Delhi pp 129 130 and al-Jalalayn —Ed. Cairo p 74 and الدر المنثور في التفسير المأثور —Ed. Cairo Vol II pp 165 166 Vol IV p 364.

⁶ انوار التنزيل —Ed. Bombay Vol I p 193 Vol II p 45

⁷ محمد بن محمد بن عيسى القاضي by السراج الكبير —Ed. Lucknow Vol I p 300 Vol II p 553

⁸ سيد محمد بن الدين بن محمد بن الدين by جامع البيان —Ed. Delhi pp. 75 295

⁹ مواضع الصلاة —Ed. Lucknow p 414.

¹⁰ فتح الباري في معاني القرآن —Ed. Bhopal Vol I p 566 Vol II, p 173

¹¹ The Mufradat p 287

Al-Zamakhsharí explains it as :—

١ الصلوة مَعْلَةٌ من صلي كالزكوة من زكى وحقيقة صلي حرك الصلوتين
لان المصلي يفعل ذلك في ركوعه وسجوده، وقيل للداعي مصد تشبيها
في تخشعه بالراكع والساجد.

Abus-Su'úd explains صليون thus :—

٢ وقيل اصل صلي حرك الصلوتين، وهما العظمان الغايتان في
اعلي الفخذين لان المصلي يفعله في ركوعه وسجوده.

while Abul-Baqá explains الصلا as :—

٣ الصلا هو العظم الذي عليه الايتان. في القاموس الصلا
وسط الظهر منا او من كل ذي اربع، او ما انحدر من الوركين.

All others follow in the same wake. In this connection it will be interesting to hear al-Zabídí, who sums up the whole so nicely in his charming style. Says he :—

٤ والصلاة اختلف في وزنها ومعناها. اما وزنها، فثقل فعله
بالتكرير، وهو الطاعر المشهور. وقبل بالسكون، فتكون حركة العين
منقولة من اللام. قاله شيخنا. واما معناها : ثقل الدعاء وهو اصل
معانيها..... ومنه قول الاعشي^٥، وصلي على دنها وارتسم—اي دعا لها
ان لانكمض ولا تقسد..... والصلاة عبادة فيها ركوع وسجود.....
وفي الزهر انهما من الكلمات الاسلامية. وفي الكل نظر.

¹ The Kashshár—Ed. Calcutta, Vol. I, p. 22.

² ابو السعود محمد بن محمد بن صفطي العبادي by ارشاد العقل السليم الي مزايا الكتاب الكريم
d. 982 (on the margin of the Tafsir-i-Kabir)—Ed. Cairo, Vol. I,
pp. 95, 66.

³ The Kulliyát, p. 403.

⁴ —مصحب الدين ابو الفيض محمد مرتضى الزبيدي by تاج العروس من جواهر القاموس
Cairo, Vol. X, p. 213.

⁵ Ibn Sîdah in Al-Mukhassas, Vol. XIII, p. 85 ; and Ibn Manzûr
in the Lisân, Vol. XIX, p. 198, also quotes this verse.

and then, after quoting some leading lexicographers on the subject, he still doubts if the word can at all be foreign, and remarks —

وان ارادوا ان الشرع ارتحل هذه اللفظة فذلك يمانية قوله تعالى
انا انزلناه قرآنا عربيا وفي الصحاح الصلاة واحدة الصلوات المفروضة
وهو اسم يوضع موضع المصدر، وصلى صلاة ولا يقال صلى تصلية

But he cannot set himself free from the haunting idea that the word is really of non-Arabian origin. He begins to explain the word صلوات to mean Jewish synagogues and gives the different readings of the word in the forms of صَلَوَات - صَلَوَات - صَلَوَات and صَلَوَات, but agrees that the soundest reading (اقوي المراءات) is صَلَوَات only. But the confusion and perplexity is still patent, when we hear from him further on —

الصلاة عندنا من الواو لكونها من الصلويين وكون جمعها صلوات
كنفاة وفتوات واما صَلَوَات وَصَلَوَات فجمع صلوة وان كاتب غير
مستعملة وتطيرها حجرة وحجرات ومعنى صلوات ههنا المساحد
وهي على حذف المضاف اي مواضع الصلوات والصلوات الصوامع
الصغار لم يسمع بها بواحد وتدل هي من الصلوى ومعنى صلى
الرحل اراد عن معناه بهذه العبادة الصلوى الذي هو بار الله الموحدة

This particular view of his is justified by him by comparing it to مَرَض and مَرَد thus —

وماء صلى كماء مريض وقدر لالة المرض والقراء

¹ That is, in Kor., XXII, 41—(our verse (a) above)

² It will be still more interesting to note that even the Arabic word *Mayyid* has its origin and parallel in the Aramaic *Mayyida*, which meant the place in which the deity was worshipped' (See *Encycl. of Rel. and Ethics. Art. Syrians (Arameans)* by J. Macier) This also explains the *kasra* on the *Jim* in the Arabic form, which the Arabic grammarians regard as an irregularity—for having sprung from *Mayyid* it must have been *Mayyid*

And again:—

وقبل انهما من الصلوتين، وهما مكتنفا ذنب الفرس وغيره.....
واشتقاقه منه ان نكوبك الصلوتين اول ما يظهر من افعال الصلوة.

This is, in short, how they try to prove the Arabic extraction of the word. *Amabilis insania!*

We have now established the fact that the word comes from Aramaic, where it means "a place of worship"—and that this should be the primary meaning of the word in the Koran also, for, otherwise, whatever the learned Arabists of the old may say, the use of this particular word, borrowed from abroad, seems to be not only unwarranted but also against the laws of perspicuity of style. And I feel sure that no Arabic word—and they certainly had none of it—could have expressed this idea so happily as the Aramaic word *Selotá* does.

But this, I agree, however, is not the only sense of the word as employed in the Koran. All writers unanimously assign to it the simplest sense of "prayer" (الدعاء-) as also the "prayer for forgiveness" (الاستغفار). This is illustrated by the Tradition:

من دعى الى الوليمة فليجب، وان كان صائما فليصل

and is the implication in the Imperative form *صَلِّ* in the verse
وصل عليهم ان سلائك سكن لهم (See vv. 30 and 31 in the list
above) as also in the vv. 29, 58, 59 and 60. Abul-Baqá
says:—

¹ صلوة الرب على النبي بعظيم الكرامة و صلاة الملائكة اظهار
الكرامة و صلاة الامة طلب الشفاعة

and then sums up the different senses of the word in the
Koran thus:—

² والصلوة في التنزيل ثاني على اوجه. الصلوة الخمس يقبسون
الصلوة و صلاة العصر و كبسونهما من بعد الصلاة و صلاة الجمعة اذا

¹ The Kulliyat, p. 403.

² Ibid.

مودى للصلاة والحنارة ولا يصل على احد منهم والدين اصلان نامرك
والفراة ولا تعهر بصلانك والدعاء فيلومع صل عليهم ان صلاتك
سكن لهم ومواضع الصلاة لانقرموا الصلاة وانتم سكارى.

He even goes to the extent of limiting the sense of
"prayer" only "for good" —

الدعاء يكون بالخير وبالشر، والصلاة لا يكون الا في الخير

Rāghib is still more informative —

وكل موضع مدح الله تعالى بفعل الصلاة ارجح عليه ذكر بلفظ
الائمة مكر والمقيمين الصلاة واميدوا الصلاة واقاموا الصلاة.

and that the word مصلين is used only for the "hypocrites"
(المنافقين) —

ولم يقل المصلين الا في المنافقين مكر قوله فويل للمصلين الذين
هم عن صلاتهم ساهون ولا يأتون الا وهم كسالى ولهداروى ان
المصلين كثير والمقيمين لاهليل، وقوله لم يك من المصلين
اي من اتمام السنين

To sum up, then, besides the "place for prayer" Salāt
also means —

- (a) Prayer in general—and "for good" in particular
- (b) The established form of prayer
- (c) Mercy and forgiveness and pardon for God's creatures.
- (d) Magnification and blessings for the Prophet.

Granted But the question arises quite naturally, how to
distinguish between them in all the verses of the Koran My
conviction is that these latter implications (a to d above) hold
good in vv 9, 25, 27, 29—33, 39, 50, 52, 58, 59, 60, 65—68
and 70 only and in all the other places it does not mean any-
thing but the "place of prayer" a mosque, a place for
congregation.

¹ Ibid.

² The Mufradāt p 287

Now taking *Salât* to mean a mosque, we find that of all the words attached to it the most important is that of *اقامة* which alone is the text of no less than twenty-four verses (*q.v.* supra). It is generally held that the epithet *اقامة الصلاة* simply means the "holding of the ritual prayer." But according to my thesis it must mean the "establishment of a mosque." The mosque is thus rendered, which doubtlessly it is, the most important institution for the Muslims. It is in fact a *كتاب مرقوت* for them, *i.e.*, "a strictly prescribed and regulated ordinance."¹ It is of paramount importance to every Muslim, and it is most strictly enjoined on every member of the community that he should present himself in the mosque (*الصلاة*) which is essentially an Assembly Hall, where the community is required to muster five times daily. This institution is so pre-eminent and important that "the whole of the Earth (except lavatories, grave-yards and slaughter-houses) is a mosque and a pure ground"² for the Muslims to assemble at. The essence of *Salât*, therefore, lies in its being an assembly, a united gathering of the great brotherhood. The Prophet was never tired of emphasising the necessity of a congregation. It must necessarily be a congregation (*جماعة*)—even though consisting of only two persons—and must be led by a Leader (*امام*) who presides over the assembly in its deliberations. They must be united as one soul, and this union gives them the strength of a "lead wall."³ It hardly needs any reminder that *اقام* is derived from *قام* (to stand), and being transitive in sense must necessarily mean "establishment, institution." Not only this; the same root gives it the force of "constancy, and continuity" as well, thus making it binding upon the believers to

¹ See v. 15 in the list above.

² The Prophet's tradition.—See the *Sahih* of al Bukhari. *Bâbus*—*Salât*; Bab 56; and Muslim, Bab *مسألة المسافرين*; also Tirmidhî on *مواقيت الصلاة*.

³ Kor., LXI, 4.

keep constantly in touch with the mosque. Zamakhshari has —

اقامت من حامت السوق اذا بعثت واقامها انها اذا حوت
عليها كانت كالسيء النافق الذي قد رجع اليه الرعات ويتنافس فيه
المحصلون، واذا عطلت واضيعت كانت كالشيء الكاسد لا يربح فيه

Zabidi explains اقام as ادام —

وامام الشيء اقامه ادامة، وبمعنونه العالي ويقومون الصلوة.

The use of اقامة with صلوة gives it a pre-eminence over the remaining three "pillars of Islam." And this is because all of them naturally flow out of the Salât. We have already seen that the Salât is strictly and essentially a place for the congregation to meet and deliberate on all and sundry matters touching the community.* To a Muslim the Salât is at once a national assembly hall, a club, a university and a place for communal worship. It is meant for the community, and all business conducted therein must be communal. Even the ritual and liturgical prayers held are congregational and strictly communal.† It was used by the Prophet for all such purposes, and his successors in Islamic state continued to

* The Kashshaf—Ld. Cairo Vol I p 99

† Tajul Arus Vol V p 35

‡ Zakat Sawm and Hajj

* This includes all the phases of life religious, social and political. It should not be forgotten that every individual Muslim lives and works for the community. Every moment of his life is dedicated to that sacred cause alone and hence the truth of the statement that for a Muslim every cause leads to one purpose only—God and religion. This idea is excellently expressed in the Verse —
(٢٥) اِنْ مَلَائِكَتِي وَرَسُولِي لَمَّا لَكَ رَابِعًا

* Though of course the individual is not barred from its use for his individual prayers nor is he in any way barred from adopting the communal form of sayim, the prayers. But I cannot help urging here that the ritual form of prayer is strictly a communal one. In this connection attention of the reader is drawn to the discussion of ذكر later on

follow his example.¹ Special services were held on certain occasions, the first place among these being occupied by the Friday Congregation.² This end was further secured in the institution of the Feast-days (صلوة العيدين) twice a year. It is doubtlessly true that "the community centred in and around the Salát in Medina in the Prophet's time, and through it the transformation of the old Arab mind into the Muslim took place. The same phenomenon was afterwards repeated in the provinces of the caliphate. The Salát *was certainly* one of the most effective formative elements in the communities."³ The ritual (of course, congregational) prayers, in which the congregation, arrayed in military order behind the leader (إمام) listens to his recital of the Word of God, all the while closely following his commands and movements, establishes a perfect order among the community and drills it into a sound habit of quiet submission and perseverance. This is how the Muslim is trained to "seek help from Salát and Sabr" (صبر = patience, perseverance).⁴ Again, the practice of Zakát and Sawm helps him to the same end.

Of Zakát and Sawm the former is very frequently mentioned along with Salát. Next comes Sawm, and lastly the Hajj, which is a general gathering of the Muslims of the world

¹ Leoni Caetani. *Annali dell' Islam*, I, 432; and Becker, "Zur Gesch. des Isl. Kultur" in "Der Islam," III, 394. Also see *Futuhul-Buldan* of Baladhuri—Ed. de Goeje, p. 229, and *البيان المغرب*—Ed. Dozy, p. 55; and *Al-Fakhri*—Ed. Ahlwardt, p. 95. The practice, however, fell into disuse later on. Yet it is a fact of common knowledge that the mosques did, and even now do, serve the purpose of educational institutions all over the Islamic world.

² The *صلوة الجمعة*—see v. no. 62 in my list,—though specially meant to be held on Fridays, was called on any day whatever as necessity demanded. Apart from the time of the Prophet, examples of such congregations are found during the times of مغيرة and حجاج in the East and of the Almohades and others in the west.

³ *Encycl. Islam*,—Art. Salát, p. 103.

⁴ Kor., II, 44, 153 (3 in my list).

at a central place designated in the Koran as *الصلوة الوسطى* the Central Mosque.¹ According to my thesis, then, *الصلوة الوسطى* is the central mosque and not the central prayer as is generally believed. The Ka'ba is, therefore, the most sacred of all the mosques of the world, and hence the particular commandment to "guard it," in the verse —

*حافظوا على الصلوات والصلوة الوسطى*²

whereas its neglect is severely censured.³ But some latitude is granted to those on a perilous journey and to such as may be taking part in actual active warfare. They are permitted to "cut short" their appearance at the Salat —

وإذا ضربتم في الأرض فليس عليكم جناح أن تقصروا من الصلوة
إن كنتم أنتم مريضون أو تسافرون أو كنتم من الغلبة

¹ Margoliouth admits the military disciplinary force of Salat and cites Musnad, IV 228 271 and Muslim II 50.

² Kor, II 236 (6 in my list). I have already shown how all the writers agree in explaining *صلوات* as mosques. This verse therefore enjoins upon the Muslims to guard all their mosques and particularly the Central Mosque. The exegetists find themselves in a strange fix while explaining this verse and in their fond obstinacy to understand *صلوات* as prayers they have naturally gone to the absurd extent of assigning the term central (*الوسطى*) to each individual prayer with reference to the other four that are grouped around the one in twos on each side. They would have saved themselves all pains if they had explained *Salawât* as mosques here too. Further the particular mention of the Salat and its designation as *الوسطى* immediately after the word *Salawât* in the same verse seems to be unnecessary until as is the case here a special emphasis is required to be laid on it. Also see Kor VI 92 *٭٭٭* 9 *٭٭٭*, 32 and of LXX 2.

³ Kor CVII 5 (71 in my list). This is the reason why *المسلمين* is interpreted as applying to hypocrites only for a true believer dare not entertain *٭٭* for Salat. Also see Kor IV 112 (No 16) and IX 4. Also of XIX 38 where the wicked progeny is mentioned in terms of *أصنامهم*.

At this juncture I may perhaps be asked how I explain the ritual prayer and its form. As to the form I have already said it is meant only and exclusively for communal gathering in the *Salât*. But, of course, the individual is not barred from adopting it for his individual purposes. Regarding the "prayer" I will simply point out that the words *ذَكَر* and *دُعَاء* are used in the Koran for it. And both of these, it is patent, are not, cannot be, bound by any particular form. The fact that *صلوة* and *ذَكَر* are two different things altogether can easily be gathered by a reference to v. 14 in my list, which runs thus:—

فاذا قضيتُم الصلوة فاذكروالله قياماوقعوداوعلى جنوبكم فاذا اطمانتم فاقيموا الصلوة، ان الصلوة كانت على المؤمنين كتابا موقونا.

And again, in v. 21 (Kor., v. 91) we read:—

¹ ويصدكم عن ذكرالله وعن الصلوة.

This shows that no particular posture is necessary for it, nor need it be couched in a loud tone, for He listens to His creatures' call in whatever tone it be.²

This theme need not detain us here, and I will refer the reader to the verses containing mention of *ذَكَر* and *دُعَاء* in the Koran.

Before I conclude, I will say a word about the script of the word. We have already seen that the word *Salât* is written in two different ways, *viz.*, the correct way, with full *alif*, and the defective way, with a small *alif* on the letter *wāv*. I repeat, that my belief is that the adoption of the defective script was intentional and was certainly meant to show that it was to be understood in the original sense of the word; whereas the

¹ While referring to this verse I may also point out in passing that this very *صدعن ذكرالله وعن الصلوة* is the reason for not permitting entrance into a mosque in the v. *لا تقربوا الصلوة* for intoxication disturbs peace, and as peace is the dearest thing (after Allāh and His Apostle) to a Muslim, no breach of it can be tolerated by him.

² Kor., XVII, 110 (No. 38), and Kor., LXVII, 13.

correct Arabic form was meant to express the secondary (the new, Arabian) senses thereof I mean the meaning of prayer, pardon, etc. We do find this difference of script in carefully written copies of the Book, and the confusion thereof is ascribable to sheer carelessness on the part of the scribes. My contention, therefore, is that the defective script must be adopted in all the places where *Salât* means a Mosque and the full *alif* should be written where other senses are implied. This will help the reader a great deal in coming to a better and truer understanding of the Koran at least as far as the institution of the *Salât* is concerned

INFLUENCE OF TEMPERATURE ON METABOLISM AND THE PROBLEM OF ACCLIMATIZATION

BY

N. R. DHAR.

It is well-known that the temperature of a warm-blooded animal is maintained at the normal even though the temperatures of the outside environments vary from zero and lower to 30° or 35° . In cold-blooded animals on the other hand the temperature of the body is only slightly higher than that of the environment at the time. The metabolism of such animals varies with the temperatures in such a manner that the respiratory exchange almost always rises with the increase in temperature, but generally irregularly but to a very different degree in different animals. The frog in the mud during the winter at a temperature of 4° has quite a different metabolism from that which he enjoys during the summer sunshine as it sits on the river bank and snaps at passing flies.

Röhrig and Zuntz¹ first showed that a curarized warm-blooded animal at ordinary room temperatures lost the power of maintaining its body temperature and the intensity of metabolism decreased accordingly. Curare prevents the transmission of motor impulses to voluntary muscles. Krogh² states that the curve of oxygen absorption as influenced by body

¹ Pflüger's Archiv, IV, 57 (1871).

² Internat. Zeitsche-f. Physik-chem. Biologie, I, 492 (1914).

temperature is the same in the anesthetized frog and fish as in the curarized dog. In warm-blooded animals the temperature is maintained at a constant level independent of the climatic condition and this level is a favourable one for the activity of nerve and muscle. It would indeed be inconvenient were the active life of a man dependent upon the temperature of the environment. The essential mechanism for the regulation of body temperature is nervous.

In warm-blooded animals a fall in the surrounding temperatures regularly causes not a decrease but an increase in the respiratory exchange, thanks to the mechanism of chemical heat regulation. The most elaborate study of the chemical heat regulation has been made by Rübnér¹ who obtained the following results in the case of a guinea-pig

Temperature of Air °C	CO ₂ per kg. and Hour Gr
0°	2.91
11°	2.15
21°	1.77
26°	1.54
30°	1.32
35°	1.27
40°	1.45

At 35° the regulation breaks down and the respiratory exchange rises with increase in temperature of the body as seen in the last experiment of the above series.

In a foregoing paper² we have shown that under standard conditions where the effect of nervous influence is excluded increase in temperature causes greater metabolism in both warm and cold-blooded animals.

¹ Die Gesetze des Energieverbrauchs bei der Ernährung (1902) Leipzig und Wien

² Dhar Proc. K. Akad. Wetensch. Amsterdam 23, 44 (1920)

After studying a considerable range of animals, Rübner has found that all animals transform nearly the same total amount of energy per Kilogram of body weight in the whole period from the birth to the natural death. The mean value of the constant Rübner finds to be 1,91,600 calories, the values for different species ranging from 1,41,091 to 2,65,500 calories. Small animals with an intensive metabolism live a relatively short time; large animals with more sluggish metabolism live a longer time. Rübner's view is that a definite sum of living action or energy transformation determines the physiological end of life. It is Rübner's law that the metabolism is proportional to the superficial area of an animal.

Erwin Voit¹ has calculated the following general table showing the heat production in resting animals of various sizes at medium temperatures of the environment:—

	Weight in Kg.	Calories produced	
		per Kilo	per Sq. M. Surface
Horse	441	11'3	948
Pig	128	19'1	1078
Man	68'3	32'1	1042
Dog	15'2	51'5	1039
Rabbit	2'3	75'1	776
Goose	3'5	66'7	969
Fowl	2'0	71'0	943
Mouse	018	212'0	1188
Rabbit (without ears)	2'3	75'1	917

The above table supports the generalisation of Rübner.

Voit shows that the metabolism of the pigeon may be doubled after removing its feathers. From the experiments of Rübner it appears that the presence of adipose tissue acts in the same way as does a warm fur to extend the range of the

¹ Zeit fur Biologie, 41, 120 (1907).

physical regulation and to delay the onset of chemical regulation of body temperature. That the range of physical regulation of temperature of a small dog was due to his long hair is shown by the change in his metabolism after shaving him. Rubner shows this in the following table

Temperature	Calories per Kilo	
	Normal coat of hair	Shaved
20°	55.9	8.3
25°	54.2	61.2
30°	6.2	52.0

It is clearly seen that this dog lost its power of physical regulation between 20° and 30°. As soon as he lost his covering of hair his metabolism became like that of a guinea pig increasing with a reduction of temperature from 30° downwards, an illustration of chemical regulation.

To determine the influence of the protective layer of fat Rubner investigated the influence of temperature on the metabolism of a fasting short haired dog at a time when he was emaciated and compared it with the fasting metabolism after the same dog had been fattened.

Dog (thin)		Same dog (fat)	
Temperature	Cal per Kilo	Temperature	Cal per Kilo
5.1	121.3	7.3	120.5
14.4	100.9	15.5	83.0
23.3	0.7	25.0	67.0
30.6	62.0	31.0	64.5

It appears from the above that the metabolism of the dog was the same at a low temperature in both cases but that

the minimum metabolism was almost reached at a temperature of 22° when the dog had a protective covering of fat which was not the case when he was thin.

The physical regulation may be increased by certain voluntary acts, such as are observed when a dog or man exposed to cold lies down and curls himself up in such a way as to offer as small an exposed surface as possible. The contrast to this is offered when on a hot day the dog lies on his back and extends on his limbs so as to promote loss of heat.

Voit gives the following results on the effect of temperature on the metabolism of a fasting man six-hour periods :

Temperature			CO ₂ excreted in G.
4·4°	...	...	210·7
6·5°	.	...	206·0
9·0°	...	...	192·0
14·3°	...	...	155·1
16·2°	...	...	158·3
23·7°	...	...	164·8
24·2°	...	...	166·5
26·7°	..	...	160·0
30·0°	...	...	170·6

Voit believed the increase in metabolism to be a reflex stimulus of cold on the skin which raised the power of muscle cells to metabolise.

Another factor in the heat regulation of man is clothes. Certain savage races living in cool climates do without clothes, as, for example, aborigines of Terra del Fuego who, according to the reports of travellers, substituted a covering of oil. In such races the process of "hardening" or development of physical regulation must be carried to a maximum. In civilized countries man endeavours to remove all the influence of chemical regulation by keeping his skin covered. Only about 20% of his surface is normally exposed to the air. The most important

constituent of clothes is the air, which is a much worse conductor of heat than is fibre. Two experiments cited by Rübner indicate the effect of clothes on metabolism. An individual was kept at a temperature of between 11° and 12° and wore different clothes at different times. His CO_2 and water excretion were as follows —

Influence of clothes on metabolism in man at a temperature of 11° to 12°

	CO_2 in gram per hour	Remarks
Summer clothes	23.4	Cold, occasional shivering
Summer clothes and Winter overcoat	26.9	Chilly part of the time
Summer clothes and fur coats.	23.6	Comfortably warm.

When a man was comfortable the chemical regulation of temperature was eliminated.

Fat persons have been directly observed to have a smaller respiratory action than lean ones. Benedict and Smith¹ have shown by comparing a number of athletes with normal subjects of similar heights and weights that the metabolism of athletes is on the average distinctly greater than that of non athletes.

While it had often been observed that smaller animals had per unit weight a greater respiratory exchange than longer ones—a quantitative study of the influence of size upon metabolism was first made by Rübner on grown dogs weighing from 30 $\frac{1}{2}$ to 34 Kilograms. Rübner found that the metabolism calculated per Kilogram increases regularly with decreasing size. When however the surface of the animal is taken into

¹ Jour Biol Chem 20, 243 (1915)

account, a practically constant metabolism per square surface was found for all.

Kettner¹ from his experiments on guinea-pigs of different age and weights finds that the metabolism per Kilogram an hour decreases fairly regularly with increasing weight whilst the differences in the results per square meter are independent of size. On the other hand, in a recent discussion Benedict² denies that there is any close relationship between size and metabolism and deprecates especially the use of the surface as a basis for comparison. His own figures and charts show, however, that such relationships exist, that the metabolism per Kg. of the body weight decreases fairly regularly with increasing weight.

The surface S of an animal is approximately proportional to the square of a linear dimension, *e.g.*, length of the body, while the weight is proportional to the third power of a linear dimension. We have therefore $S = CW^{\frac{2}{3}}$ the constant C has been worked out for different species. It does not vary much even in forms of very different shapes. For man and also for a dog we have $C = 12.3$, for the rabbit 12.9, the horse 9.0, the rat 9.1 and the guinea-pig 8.9.

It is quite possible that the surface as at present defined $CW^{\frac{2}{3}}$ does not give the very best agreement in comparisons of different individuals. The main point is that metabolism in warm-blooded animals is not proportional to the weight W but to W^n where n is certainly not far from $2/3$.

On the whole, looking at the problem from a broad point of view, it seems pretty certain that the surface law of Rübner is generally proved as far as the metabolism of warm-blooded animals are concerned.

In the following pages, I shall try to find out a physical significance of Rübner's generalisation and other facts regarding

¹Arch. fur Physiol., 447 (1909).

²Journ. Biol. Chem., 20, 263 (1915).

the influence of temperature on metabolism in both warm and cold-blooded animals. We can look at this problem of metabolism of different warm-blooded animals from the following considerations —

(1) The body temperature of warm-blooded animals is normally much higher than the surrounding air. In the case of some birds, sparrow, hen, etc., the body temperature is about 42° . In the case of rabbit it is $39^{\circ}6$ and in the case of dog it is $39^{\circ}2$.

(2) Experimental results have shown that radiation is the most important factor in the loss of heat from animal body. Let us assume that a metallic ball of radius r and density of the material ρ is placed in air at say T_0 and we are supplying heat to the ball so that the temperature of the ball may be kept constant at T where T is greater than T_0 . Now in order to maintain this constant temperature a supply of heat has to be given to the ball, otherwise, the body loses heat and cools down to the temperature of the surrounding air (T_0). From the Stefan's law of radiation we know that the loss of energy from the surface is equal to $4\pi r^2 \sigma (T^4 - T_0^4)$, where $4\pi r^2$ is the surface of the body in question and σ is Stefan's constant. Therefore the rate of supply of heat to the body per unit mass in order to keep the body temperature constant to T is equal to $\frac{4\pi r^2 \sigma (T^4 - T_0^4)}{4\pi r^2 \rho} = \frac{3 \rho \sigma}{r} (T^4 - T_0^4)$.

From the foregoing relation it would be seen that the rate of supply of heat per unit mass varies inversely as the radius of the body in question. In other words, a small ball of the same material requires a much larger quantity of heat per unit mass of the body. Let us apply these considerations to the question of metabolism in animals. Ordinarily warm-blooded animals are surrounded by air of a much lower temperature than the temperature of the animal body. In other words, the animal is constantly giving out heat to the outside surroundings mainly by radiation and in

order that this phenomenon may take place, the metabolism of the system should increase in order to keep the body temperature constant. From the foregoing considerations it will be evident that the amount of heat per unit weight of the body lost by the animal due to this radiation is greater the smaller the size of the animal. This conclusion is actually corroborated by experiments. Consequently from physical principles it follows that the loss of heat per unit weight of the body and the consequent metabolism in the animal body to keep up this loss of heat is greater the smaller the size of the animal.

From the relation obtained it is seen that the rate of supply of heat per unit mass is proportional to the difference in temperature between the body and the surrounding air; in other words, the greater is the difference in temperature the greater is the rate of supply of energy per unit mass of the substance. Consequently when a warm-blooded animal is surrounded by air which is colder than the air with which it is normally surrounded, his rate of supply of energy and consequently his metabolism should also increase and that is the reason why metabolism in the case of warm-blooded animals increases with the fall of surrounding temperature.

We have already shown that the loss of energy from the surface $= 4\pi r^2 \sigma (\tau^4 - \tau_0^4)$. Now if we express this loss per unit surface, the expression becomes $\sigma (\tau^4 - \tau_0^4)$; in other words, the question of radius or the size of the body does not come into consideration and the loss of energy per unit surface becomes proportional only to the difference between the body temperature and that of the surrounding air. This has been experimentally obtained by Rubner who has obtained the following results with guinea-pig:

Temperature		CO ₂
0°	...	2.91
11°	...	2.15
21°	...	1.77

If we calculate the metabolism according to the relation $\sigma(T^4 - T_0^4)$, we find that the ratio of the metabolisms at 0° and 11° is about 1.2 whilst the observed ratio of the metabolism is about 1.3, the calculated value between 21° and 26° is 1.38 and the observed value is 1.2, taking the average temperature of guinea-pig to be 38.2° . Hence we get a physical significance of Rubner's law.

From the foregoing pages, it will be evident that Rubner's generalisation would be applicable mainly to warm-blooded animals, because usually they maintain a higher body temperature irrespective of the temperatures of the surroundings, and the laws of radiation would be applicable to such cases.

In the case of cold-blooded animals the body temperature is only slightly higher than the temperature of the surroundings and the foregoing considerations are not applicable in these cases and Rubner's generalisation is not valid for cold-blooded animals.

In the foregoing pages we have observed that usually smaller animals have more metabolism per unit weight of the body than larger animals, in other words weight for weight, the catalyst or the enzyme in smaller animals is more reactive than the catalyst in larger animals. It sounds very queer that the activity of the enzymes present in the system of a dog is much greater than the activity of those present in the case of a man, or we have to assume that the amount of the catalyst per unit weight of the body is much greater in the case of smaller animals than in large animals. It will be seen in the subsequent discussion that the former proposition is more reasonable than the latter. In other words, we are led to the conclusion that the physical activity and the amount of oxidation per unit weight of the body are much greater in the case of a dog than in the case of a man. Even a most casual observation of the domesticated animals has shown that as a rule small animals do not live so long as large ones.

As a general rule, it may be said that a large animal takes more time than a small one to reach maturity, and it has been inferred from this that the length of the period of growth is in proportion to longevity. Hence small animals with intensive metabolism live a relatively short time. Large animals with more sluggish metabolism live a longer time. We have already mentioned that Rubner's view is that a definite sum of living action or energy transformation determines the physiological end of life.

There are chemical analogies to these biological facts. Sabatier and his colleagues have shown that when metallic Ni, which is used as a catalyst in the hydrogenation processes, is prepared under suitable conditions at as low a temperature as possible, the activity of the catalyst is extremely great, but it loses its activity very readily. From our experiences with other catalysts, we know that an extremely active catalytic surface deteriorates also very readily. In other words, an extremely active catalytic surface is more liable to be poisoned or to undergo other changes which would affect its activity as a catalyst than the surface of moderately active catalysts.

Consequently it seems probable that in the biological processes of metabolism extremely active catalysts are likely to lose their activity more readily than moderately active catalysts. In other words, the catalysts which accelerate the metabolism for oxidation in the case of dogs induce in an unit time more oxidation than the moderately active catalysts present in human system, but the more active catalyst present in smaller animals is more liable to lose their activities by poisoning or other alterations than the moderately active catalysts present in the human body and that is why death is more rapid in the case of animals having more active catalysts than in animals having moderately active ones. In this

connection the following experiments of Sloniker¹ on rats will be of interest

Sloniker kept 4 albino rats in cages like the old-fashioned revolving squirrel-cage, with a properly calibrated odometer attached to the axle, so that the total amount of running which they did in their whole lives could be recorded

It was observed that the amount of exercise taken by these rats was astonishingly large. For a rat to run 5,447 miles in the course of its life is indeed a remarkable performance. Now these 4 rats attained an average age at death of 29.5 months. But three control rats confined in stationary cages so that they could only move about to a limited degree, but otherwise under conditions, including temperature, identical with those in the revolving cages, attained an average age at death of 40.3 months. All were stated to have died of "old age". From this experiment it clearly appears that the greater the total work done or total energy output, the shorter the duration of life, and vice versa.

We shall now try to explain the possibility of acclimatization of warm-blooded animals from this point of view. As we have already mentioned, when there is a fall in the surrounding temperature the metabolism of warm-blooded animals is increased, in other words, when a warm-blooded animal is brought from a warmer climate to a cooler climate, its metabolism and the catalytic activity of the body enzymes is increased. In other words, there is a *strain* in the system. In the case of human beings this relation should also be valid. We have already mentioned that usually 20% of the body surface is exposed to air in the case of human beings, the remaining 80% is covered by clothes, so we have to consider only the exposed portion. Now even for this comparatively small exposed portion the metabolism of the body should increase on lowering the temperature.

¹ Journ. Animal Behaviour 2: 20 (1912)

of the surroundings. Consequently the catalyst in the body would be activated; but as Rübner has shown, the standard metabolism cannot undergo rapid changes as the oxidative energy of the cells is adapted to the usual conditions regarding the loss of heat and is altered very gradually with those conditions; hence the system of a human being or an animal brought from a warmer climate to a cooler climate will be in a state of strain.

In the case of cold-blooded animals it is evident the metabolism is much slower than in the case of warm-blooded animals. Hence the catalytic activity of the enzymes present in cold-blooded animals is not as great as those in the warm-blooded animals of the same size. Consequently the duration of life of a cold-blooded animal is usually greater than that of a warm-blooded animal of the same size and this is corroborated by evidence from biology, because experiments show that cold-blooded animals live much longer than warm-blooded animals of the same size.

In the case of warm-blooded animals when they are transported from a warmer climate to a cooler climate, metabolism is increased. The effect of this is that the catalytic activity of the enzymes has to increase in order to produce greater combustion in a unit of time.

I have already emphasised that when the catalyst is made to work at a greater speed than the normal one, the life period of the catalyst is decreased. Consequently one effect of the transportation of a warm-blooded animal from a warmer climate to a cooler climate will be to activate the enzymes in the body and it will lead to its shortening of the life period.

The temperature of a warm-blooded animal remains constant whatever may be the temperature of the surroundings. Consequently the catalyst has to work at the same temperature irrespective of the temperature of the outside surroundings. Thus in the case of warm-blooded animals, the question of ageing of the catalyst at a greater rate due to the increase in

temperature does not rise because the catalyst works at a constant temperature which is the body temperature of the animal in question provided the external temperature is less than the body temperature. So the main effect of transporting a warm-blooded animal from a warmer country to a colder country is to increase the activity of the body enzymes and to increase the metabolism and to shorten the life period of the animal in question. Now if the enzymes which were used to generate smaller quantity of heat in a warmer climate are asked to produce greater quantity of heat in a cooler climate, they will by and by be tired out. In course of time the individual or the animal in question would feel the strain, and it seems possible that as years go he will feel the strain more and more. It seems probable thus that a human being transported from a warmer climate to a cooler climate will feel the cold more and more as years go by.

On the other hand, if a warm-blooded animal is transported from a cooler climate to a warmer climate, let us see what will be the result on his system by this transportation. As soon as he is surrounded by a warmer atmosphere, the amount of metabolism which he was used to produce in a colder surrounding has to become less because now he is surrounded by a warmer atmosphere. Consequently the catalyst inside the body has to work less in a warmer climate than in a colder climate. Hence the life period of the individual in question is likely to be increased when he is transported from a cooler to a warmer climate provided that the exterior temperature is not greater than his body temperature.

I am of the opinion, therefore, that it is more advantageous for a man living in a colder climate to come to a warmer climate than the reverse. When a warm-blooded animal has to live in a country where the outside temperature is usually greater than the body temperature, then the animal will age and grow old and die more readily than an animal living in a cold country because at the higher temperature, the body

catalysts will age more quickly. Thus this case of a warm-blooded animal will be allied to that of a cold-blooded animal.

In this discussion, I have all along neglected the consideration of humidity and its influence on human beings and animals.

There is another factor—that of the colour of the skin surface; animals with deeper colour are likely to radiate heat more readily than animals with fair complexion.

I have emphasised that the metabolism of cold-blooded animals is much less than in the case of warm-blooded animals under the same conditions; in other words, the enzymes present in cold-blooded animals are not as active as those present in warm-blooded animals. We have also observed that the body temperature of a cold-blooded animal is usually slightly higher than the temperature of the surrounding air and that the metabolism in the case of a cold-blooded animal goes on increasing as the surrounding temperature is increased.

Let us see what takes place on a cold-blooded animal living in a warmer country being taken to a cooler country:—

The metabolism in the system will decrease and the animal has to live a life of less intensity and possibly with a less sense and feeling of well-being. The enzymes have to generate lesser quantities of heat in the cool atmosphere and consequently their period of life will be increased and the animal is expected to live a longer life in a cooler surrounding. Moreover, the body catalysts will not age as rapidly in the cooler surroundings as would have been the case in a warmer country. Consequently the two factors will both lead to a greater longevity of the cold-blooded animal in question when transported from a warmer to a cooler country.

On the other hand, when a cold-blooded animal habituated to a cooler locality, is transported to a warmer country, his metabolism in an unit of time will be increased and the catalysts in the body have to perform more work. Consequently

the period of activity of the catalyst will be decreased and the life of the animal is likely to be shortened, though the animal has a more intense and active life in a warm surrounding. Moreover, in a warmer country the body catalyst is likely to age more rapidly than in a cool country. Consequently the effect of both these factors is that old age and death would follow more rapidly in a cold-blooded animal transported from a cooler atmosphere to a warmer place.

RECENT WORK ON ZEEMAN EFFECT*

BY

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1. INTRODUCTION.

In 1845, Faraday first demonstrated the fundamental relation between light and magnetism. This wonderful discovery, known after him as the Faraday Effect, refers to the rotation of the plane of polarisation by isotropic substances of high refractive index when placed in a strong magnetic field, the plane polarised beam being transmitted parallel to the lines of force of the magnetic field. This discovery was followed by Kerr who in 1877 succeeded in demonstrating that a delicate change takes place in the state of polarisation of a beam of polarised light reflected from the poles of an electro-magnet. Both these facts, however, relate to light which is being propagated in space, but in 1896 Zeeman discovered the influence of a strong magnetic field on the source of light itself. He demonstrated that in the simplest cases, a spectral line splits up in two lines, when the beam is viewed along the lines of force, and three lines when viewed perpendicularly to the lines of force of the magnetic field in which the source is placed; of the latter one occupies the original position, and the other two are symmetrically displaced from the normal position by an amount $\Delta \nu = \pm \frac{e}{m} \frac{H}{4\pi c} = 4.70 \times 10^{-5} H$, where $\Delta \nu$ is expressed on the scale of wave-numbers, and H in Gauss, the other notations having their

* Read before the Joint Sitting of the Chemistry and the Physics Sections of the Indian Science Congress at Bombay, January, 1926, as one of the Papers in the discussion on "Atomic Structure and Quantum Theory."

usual significance. He also proved that the lines are polarised, in the longitudinal mode of observation they are circularly polarised in opposite sense, and in the transverse mode they are plane polarised as shown in Fig 1. The symbols π and σ refer to the directions of the electrical vibrations in the ray at the point of observation.

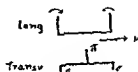


Fig 1

This startling discovery at once attracted a large number of workers in the field, and it was soon discovered by Preston, Cornu, Michelson simultaneously with Zeeman himself, that the simplest type of resolution, known as the normal type, is not obtained with many spectral lines. They found that often quartets and sextets are obtained and this is known as the Anomalous Zeeman Effect. The Zeeman components of the well-known D lines of sodium in the transverse effect are shown in Fig 2 which depicts clearly the number of components, and their state of polarisation.

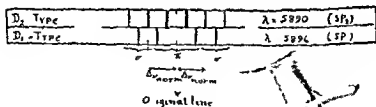


Fig 2

This type is characteristic of all the members of the principal series of sodium as well as those of the second subsidiary series, it again recurs in the same two series of all the alkali metals, and copper and silver.

Fig. 3 again shows the Zeeman type of the $2p_1-1s$, $2p_2-1s$, $2p_3-1s$ lines of mercury, belonging to the second subsidiary series. The wave-lengths are shown on the right-hand side of the figure. This type repeats itself with the lines arising from similar combinations in the spectra of cadmium, zinc, and the alkaline earths. From these observations Preston¹ was able to draw the significant conclusion that lines arising from the combinations of similar terms show the same Zeeman type, and this type is the same for corresponding lines in homologous spectra of different substances.

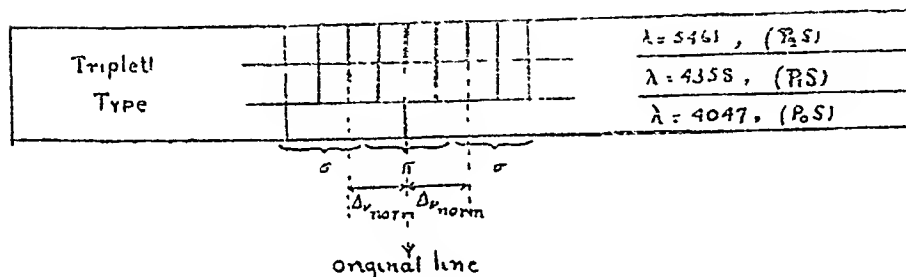


Fig 3

Another important rule was given by Runge² based on the particularly abundant types of Neon. It states that the separations of the components of a line, when measured in wave-numbers are rational multiples of the normal separation. In the Figs. 2 and 3, the distances of the components from the original line are $\frac{1}{3}$ and $\frac{1}{2}$ respectively of the normal resolution, and hence the Runge denominators are 3 and 2 respectively in the two cases.

Starting from Runge's law, Sommerfeld³ has deduced the Law of Mangeto-optic Resolution for the Anomalous Zeeman types of doublet and triplet systems of spectral lines. Now the Combination Principle of Spectroscopy is also applicable to the case of lines emitted under the influence of a magnetic field.

¹ Preston, cf. Kayser's Handbuch der Spectroscopie, 2. 619.

² Runge Physikal Zeitschr, 8. 232 (1907).

³ Sommerfeld, Ann. d. Phys., 63, 121 (1920).

According to Bohr's theory a line is emitted by a valence electron of an atom in passing from an initial orbit to a final orbit round the nucleus. The magnetic field influences the energy in each of these configurations, and thus separately the two terms, which give the series representation of a line. If this is given by ν_1, ν_2 , then for the magnetic resolution we have

$$\Delta\nu = \Delta\nu_1 - \Delta\nu_2 \quad (1)$$

In accordance with Runge's rule, Sommerfeld puts

$$\Delta\nu = \frac{q}{r} \Delta\nu_{\text{norm}} \quad (2),$$

where r is the Runge denominator and q the Runge numerator, which varies in each type of resolution, and its different values fix the various components as shown in Figs. 2 and 3. Now as each term is affected by the magnetic field, we can put

$$\Delta\nu_1 = \frac{q_1}{r_1} \Delta\nu_{\text{norm}} \text{ and } \Delta\nu_2 = \frac{q_2}{r_2} \Delta\nu_{\text{norm}}$$

and hence from (1) and (2) we have

$$\frac{q}{r} = \frac{q_1}{r_1} - \frac{q_2}{r_2}$$

$$\text{or } \frac{q}{r} = \frac{q_1 r_2 - q_2 r_1}{r_1 r_2} \text{ and hence } r = r_1 r_2 \quad (3)$$

Hence the Law of Magnetic Resolution states that the observable Runge denominator r of the term combination resolves into the denominators r_1 and r_2 of the terms and is composed of their product.

The practical use of this law has been discussed by Sommerfeld¹ as follows. As the Zeeman separation is normal for simple lines, $r = 1$ for them, and hence $r_1 = r_2 = 1$. Now as the s terms of doublet and triplet systems are always simple, Sommerfeld starts with the generalisation that the Runge denominator is always equal to 1 for s terms.

¹ Sommerfeld Atomic Structure and Spectral Lines—English translation 3rd Edition Ch VI pp 391-392

In Fig. 2 has been shown the Zeeman type for (sp) doublets. The Runge denominator for them is equal to 3, and as $r_1 = 1$ for s term, we get $r_2 = 3$ as the Runge denominator for p terms.

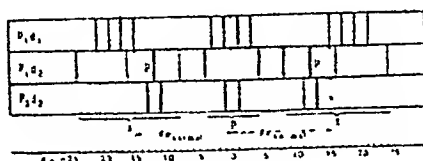


Fig 4

In Fig. 4 is shown the Zeeman pattern for (pd) terms of doublets. For these $r=15$. As $r_1 = 3$ for p terms, $r_2 = 5$ for d terms; but this is ambiguous, for $r_2 = 3.5$ would also be compatible with $r_2 = 15$ and $r_1=3$. If we make the simpler assumption that $r_2 = 5$, we arrive at the following scheme for the Runge denominators for the doublet terms :—

s	p	d	b	x	y
1	3	5	(7)	(9)	(11)

The numbers within the brackets have been extrapolated.

If we now turn our attention to the Zeeman resolution of the triplet system $2p_1 - m_s$ ($i=1, 2, 3$) as shown in Fig. 3, we find that $r = 2$. As $r_1 = 1$ for s terms, we get $r_2 = 2$ for p terms. Starting with the value $r_2=2$ for p terms, if we now take up the Zeeman resolution for (pd) combinations as shown in Fig. 5, we find $r_2=3$ for d terms, as $r=6$ for such types.

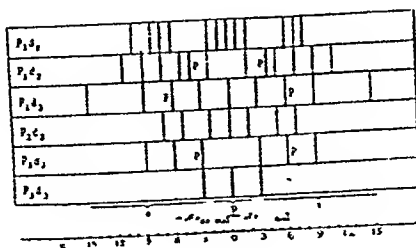


Fig. 5

Thus Sommerfeld arrived at the following scheme for the Runge denominators of the triplet systems —

s	p	d	b	x	y
1	2	3	(4)	(5)	(6)

The numbers within the brackets have been obtained by extrapolation.

But this scheme is erroneous as will be shown later on. From $r=6$, we have concluded that the Runge denominators for p and d terms are 2 and 3 respectively, but this is not the only possible deduction from it. From $r=6$, we may put $r_1=12$ for p term and $r_2=23$ for d term, for from equation (1) it follows that r is not equal to the product $r_1 r_2$, but is equal to the least common multiple of r_1 and r_2 when r_1 and r_2 have common factors. To remove this ambiguity we have to consider the (Pd) combinations between the single and triplet terms of the alkaline earths. Since here $r_1=1$ for P terms, the Runge denominator becomes identical with the denominator r_2 of the d term. From experimental data, we obtain $r=6$, and thus $r_2=6=2.3$ for d terms. Thus we arrive at the following scheme for the Runge denominators of the triplet terms —

s	p	d	b	x
1	12	23	(34)	(45) and so on

At this stage, we may introduce Landé's¹ scheme for the Anomalous Zeeman type of doublet terms. According to Sommerfeld and Debye's² quantum theory of the normal Zeeman-effect, which we propose to discuss more fully later on, the original energy of an electron in a Kepler orbit round the nucleus of the atom is changed under the influence of the magnetic field from W_0 to $W=W_0 + m\hbar \frac{\Omega}{2\pi}$, where Ω is the Larmor precession of the orbit about the direction of the lines of force of the magnetic

¹ Sommerfeld *Physikal Zeitsch* 17,491 (1916)

² Debye *Göttinger Nachr* 3 Juni 1916

of the theory. It is based on the Combination Principle of Spectroscopy $\nu = \nu_a - \nu_e$ or $h\nu = W_a - W_e$, W_a and W_e being the energy of the electron-system in the initial and final configurations. Due to the impressed magnetic field, the energy in each of the states changes, and this change of energy is calculated by assuming that the field H leaves the form of the orbits, and their inclination to the magnetic lines of force, as also the motion in the orbit, unaltered, but adds a uniform precession of the orbit round H , the precessional velocity being given by

$$O = \frac{1}{2} \frac{e}{m} \frac{H}{c} \dots \dots \dots (6)$$

Thus due to the implied magnetic field H , the magnitude of the resultant angular momentum J of the atom does not change, but the direction of its axis changes, as it describes a precessional cone about the direction of the magnetic field. Thus from mechanical laws it follows that the total change in the kinetic energy of the electron-system is given by

$$\Delta W = \frac{m}{2\pi} O.h \dots \dots \dots (7)$$

where O is given by (6), and m is termed the magnetic quantum number. The meaning of m is made clear by considering the component $M = J \cos(J H)$ of J along H . Just as J is connected with the inner quantum number j by the relation $j = \frac{2\pi J}{h}$, so m is also given by $m = \frac{2\pi M}{h}$. From (7), we obtain for the difference of the total energy in the initial and final orbit of the electron-system as

$$\Delta W_a - \Delta W_e = \frac{m_a - m_e}{2\pi} \cdot O.h \dots \dots \dots (8)$$

$$\text{Whence } \Delta \nu = \frac{m_a - m_e}{2\pi} \cdot \frac{1}{2} \frac{e}{m} \frac{H}{c}$$

$$= (m_a - m_e) \cdot \frac{e}{m} \frac{H}{4\pi c} \dots \dots \dots (9)$$

To account for the normal Zeeman-effect Sommerfeld assumes that $m_s - m_a = \pm 1$ or 0. This is known as the selection principle for the magnetic quantum number m , a change of m by ± 1 leads to circular polarisation in the longitudinal effect or to linear polarisation perpendicular to the field in the transverse effect, and a change of m by 0 leads to linear polarisation parallel to the field. These results agree completely with those of Lorentz, obtained from the classical electron-theory.

Now we proceed to explain anomalous Zeeman-effect. As the inner quantum number j^* has integral values or values equal to multiples of $\frac{1}{2}$, accordingly as it stands for odd or even multiplets, m simultaneously with j , on account of the spatial quantisation of the orbits will also assume values, which are either integers or multiples of $\frac{1}{2}$. The possible values of m are given by

$$m = j, j-1, j-2, \dots, -(j-2), -(j-1), -j \quad (10)$$

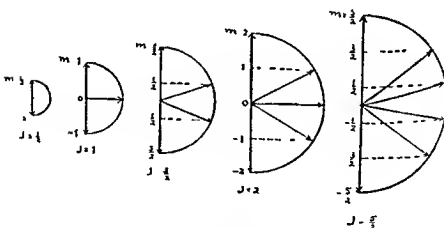


Fig 6

* Recently Sommerfeld has introduced for j values equal to multiples of $\frac{1}{2}$ for even multiplets *vide* Sommerfeld *Atombau und Spektrallinien* 4th Edition Chap VIII p 591

Some of the possible orientations of j are shown in Fig. 6, H being taken upwards from O in the plane of the paper. The total number of possible values of $m=2j+1$, and the difference between any two values of m is always a whole number, though m may either be an integer or a multiple of $\frac{1}{2}$. The value $m=0$ corresponds to a position perpendicular to H , and $m=\pm j$ to a position parallel or antiparallel to the magnetic lines of force.

The selection principle and polarisation rule for m is given by

$$m_a - m_o = \begin{cases} \pm 1 & \dots \dots \sigma \text{ components} \\ 0 & \dots \dots \pi \quad ,, \quad \dots \dots \end{cases} \quad (11)$$

The transition $m_a = 0$ to $m_o = 0$ is forbidden.

Now from the classical conception of a magnetic moment being equivalent to an electric current, and from the quantum theory we have the relations

$$\mu = j \mu_1 \text{ and } \mu_1 = \frac{e}{m} \frac{h}{4\pi} \quad \dots \quad (12)$$

μ_1 being the Bohr magneton. The mechanical moment $\frac{j\hbar}{2\pi}$ of the atom corresponds to the magnetic moment μ of the atom, and if we suppose the axis of j to be coincident with that of μ , the magnetic energy of a stationary orbit of the atom is

$$\begin{aligned} \Delta W &= 0. m \frac{h}{2\pi} \\ &= \frac{\mu}{j} m. H. \quad \dots \quad (13) \end{aligned}$$

Equation (13) is obtained by substituting the value of O from (6) and by choosing the proper units. Hence from (13)

$$\Delta \nu = \frac{\mu}{j} m \frac{H}{h} \quad \dots \quad (14)$$

Equation (14) can be put in the form

$$\Delta \nu = \frac{\mu}{j} m \quad (15)$$

when $\Delta \nu$ as a fraction of the normal Zeeman factor $\Delta \nu_{\text{norm}}$ and μ in terms of μ_B are measured. Hence from the magnitude of $\Delta \nu_{\text{norm}}$ and from equation (12)

$$\text{we get } \frac{\mu_B}{\Delta \nu_{\text{norm}}} \frac{H}{h} = 1 \quad (16)$$

Following Lande we now write

$$k = \frac{\mu}{j} \quad (17)$$

g —being the 'aufspaltungsfaktor'. According to the rules of Preston and Runge, g or $\frac{\mu}{j}$ must be a rational expression in r , k and j , being independent of the total quantum number (Haupt quantum number) n , and the atomic number Z , here r stands for the term-multiplicity of the system, and k , j denote the azimuthal quantum number and inner quantum number respectively. Now with Sommerfeld we write, j_s being the inner quantum numbers of the s term, $j = j_{\text{max}} = j_s + j_k$, $j_s = k - 1$ and $r = 2j_s + 1$. Lande's¹ expression for g in terms of these quantities is given by

$$g = 1 + \frac{j(j+1) + j(j+1) - j_s(j_s+1)}{2j(j+1)} \quad (18)$$

$$\text{or } g = \frac{1}{2} + \frac{1}{2} \frac{(j_s - j)(j + j_s + 1)}{j(j+1)} \quad (19)$$

Both are equivalent expressions. A complete list of the values of g for different values of r and j has

¹ Lande *Za. f. Physik* 15 189 (1923)

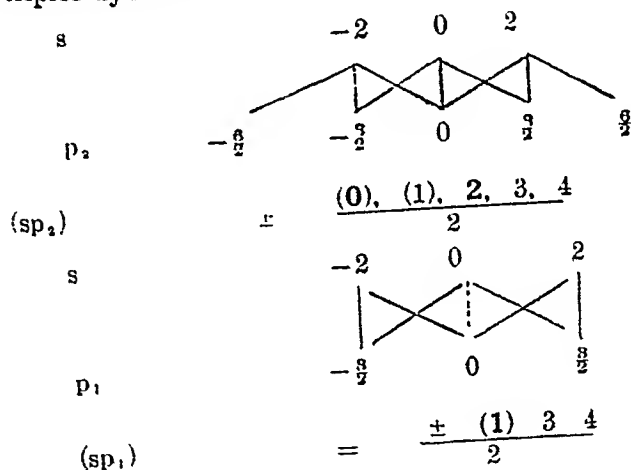
been given by Lande,¹ and is shown in the following table:—

$j = 0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7$										$\frac{1}{2}$	$\frac{3}{2}$	$\frac{5}{2}$	$\frac{7}{2}$	$\frac{9}{2}$	$\frac{11}{2}$	$\frac{13}{2}$	$\frac{15}{2} = f$		
$j_a = 0$	s	0	Singlet							2	Doublet							s	$0 = j_a$
	1 p	1	$j_s = 0$							$\frac{3}{2}$	$\frac{5}{2}$						$j_s = \frac{1}{2}$	p	1
	2 d		1							$\frac{5}{2}$	$\frac{7}{2}$						d	2	
	3 f			1							$\frac{7}{2}$	$\frac{9}{2}$				f	3		
	4 g				1							$\frac{9}{2}$	$\frac{11}{2}$				g	4	
0	s	2	Triplet							2	Quartet							s	0
	1 p	$\frac{3}{2}$	$\frac{5}{2}$	$\frac{7}{2}$	$j_s = 1$				$\frac{5}{2}$	$\frac{7}{2}$	$\frac{9}{2}$	$j_s = \frac{3}{2}$			p	1			
	2 d		$\frac{5}{2}$	$\frac{7}{2}$	$\frac{9}{2}$				0	$\frac{7}{2}$	$\frac{9}{2}$	$\frac{11}{2}$			d	2			
	3 f			$\frac{7}{2}$	$\frac{9}{2}$	$\frac{11}{2}$	$\frac{13}{2}$			$\frac{9}{2}$	$\frac{11}{2}$	$\frac{13}{2}$	$\frac{15}{2}$		f	3			
	4 g				$\frac{9}{2}$	$\frac{11}{2}$	$\frac{13}{2}$	$\frac{15}{2}$			$\frac{11}{2}$	$\frac{13}{2}$	$\frac{15}{2}$	$\frac{17}{2}$		g	4		
0	s	2	Quintet							2	Sextet							s	0
	1 p	$\frac{5}{2}$	$\frac{7}{2}$	$\frac{9}{2}$	$\frac{11}{2}$	$\frac{13}{2}$	$j_s = 2$		$\frac{13}{2}$	$\frac{15}{2}$	$\frac{17}{2}$	$j_s = \frac{5}{2}$			p	1			
	2 d	$\frac{7}{2}$	$\frac{9}{2}$	$\frac{11}{2}$	$\frac{13}{2}$	$\frac{15}{2}$			$\frac{15}{2}$	$\frac{17}{2}$	$\frac{19}{2}$	$\frac{21}{2}$			d	2			
	3 f	0	1	$\frac{5}{2}$	$\frac{7}{2}$	$\frac{9}{2}$	$\frac{11}{2}$			$\frac{17}{2}$	$\frac{19}{2}$	$\frac{21}{2}$	$\frac{23}{2}$		f	3			
	4 g		$\frac{9}{2}$	$\frac{11}{2}$	$\frac{13}{2}$	$\frac{15}{2}$	$\frac{17}{2}$	$\frac{19}{2}$		0	$\frac{17}{2}$	$\frac{19}{2}$	$\frac{21}{2}$	$\frac{23}{2}$	$\frac{25}{2}$	g	4		
0	s	2	Septet							2	Octet							s	0
	1 p		$\frac{7}{2}$	$\frac{9}{2}$	$\frac{11}{2}$	$\frac{13}{2}$	$\frac{15}{2}$	$\frac{17}{2}$	$j_s = 3$	$\frac{19}{2}$	$\frac{21}{2}$	$\frac{23}{2}$	$\frac{25}{2}$	$j_s = \frac{7}{2}$		p	1		
	2 d		$\frac{9}{2}$	$\frac{11}{2}$	$\frac{13}{2}$	$\frac{15}{2}$	$\frac{17}{2}$	$\frac{19}{2}$		$\frac{21}{2}$	$\frac{23}{2}$	$\frac{25}{2}$	$\frac{27}{2}$			d	2		
	3 f	$\frac{9}{2}$	$\frac{11}{2}$	$\frac{13}{2}$	$\frac{15}{2}$	$\frac{17}{2}$	$\frac{19}{2}$	$\frac{21}{2}$		4	$\frac{23}{2}$	$\frac{25}{2}$	$\frac{27}{2}$	$\frac{29}{2}$		f	3		
	4 g		$\frac{11}{2}$	$\frac{13}{2}$	$\frac{15}{2}$	$\frac{17}{2}$	$\frac{19}{2}$	$\frac{21}{2}$	$\frac{23}{2}$		$\frac{25}{2}$	$\frac{27}{2}$	$\frac{29}{2}$	$\frac{31}{2}$	$\frac{33}{2}$	g	4		

We illustrate the use of the table by calculating the Zeeman components of a line (s , p) belonging to the octet-system, j being equal $\frac{7}{2}$ for s term and $j = \frac{5}{2}$ for p term. From the table we see $g = 2$ always for the s term, and in the vertical column below $\frac{5}{2}$ is $g = \frac{15}{8}$ for the p -term in question,

¹ Lande Zs. f. Physik 15, 189 (1923).

the combination of two terms, which consist of unequal numbers of magnetic levels m , those p -components are the strongest which through the vertical combinations come in the middle of the scheme, and those σ -components are the strongest, which by the oblique combinations occur at the end of the scheme. But by the combination of two terms, which contain the same number of magnetic levels m , the word 'strong' is to be replaced by 'weak,' the intensity of the central p -component $m_a=0 \rightarrow m_b=0$ being zero. These rules are illustrated by the two following examples taken from the Zeeman-types of the triplet system:—



In these tables, against s , p_2 and p_1 are noted the values of mg as obtained from Lande's table, and the strongest components are denoted by thick figures. These intensity rules have also been verified by the above-quoted experiments of Back.

In this connection it is worth stating that the conception of the magnetic moment of an atom has received a brilliant confirmation by the experiments of Stern¹ and Gerlach.² From the relation $g = \frac{m}{j}$ we can obtain the magnetic moment of an

¹ Stern, Zs. f. Physik, 7, 249 (1921).

² Gerlach and Stern, Zs. f. Physik, 8, 110 (1921) and 9, 349 (1922).

atom in terms of the Bohr magneton by knowing 'g' from Landé's table for the fundamental term of the atom obtained from spectroscopic data, j being the inner quantum number of the same term. The experiments of Stern and Gerlach are in exact agreement with the spectroscopic data of copper, silver and gold, but do not agree with those of iron and nickel. According to Laporte's¹ series-classification of iron lines, the fundamental term is a d term, but it is not in agreement with the experiments of Stern and Gerlach. The lines of iron so far classified do not include some strong lines in the region about $\lambda = 2100\text{\AA}$, which are reversed in the under-water spark of iron, and only further classification can settle the points in question.

3 PASCHEN-BACK EFFECT

In 1912, Paschen and Back¹ discovered that the Zeeman type of a line depends upon the strength of the external magnetic field relative to the original separations $\Delta\nu_0$ of the system of lines which belong together in a series as multiplicities. A magnetic field is considered to be weak, when the displacements $\Delta\nu$ produced by it are small compared with the original separations $\Delta\nu_0$ between the lines when the magnetic field is absent, and strong when it produces displacements large compared with $\Delta\nu_0$. Thus if we take the lines close to one another and subjected to a magnetic field, weak in comparison with the internal magnetic field of the atom the Zeeman type of each line is developed without being influenced by the Zeeman components of the neighbouring lines, but when a magnetic field strong enough to overcome the internal magnetic field is applied, the anomalous types disappear, and every line configuration develops the normal Zeeman type. Under the influence of such strong fields, an asymptotic condition is finally attained, as if the original multiplicities did not exist at all. Prior to

¹ Paschen and Back *Ann d Phys* 39 897 (1912) and 40 900 (1913)

the discovery of Paschen-Back effect, it was known that lithium did not exhibit the same type of anomalous Zeeman-effect as the other alkali metals, *e.g.*, sodium; but this apparent contradiction to Preston's rule is removed by considering the cases of the well-known D lines of sodium, and the line $\lambda = 6708 \text{ \AA}$ of lithium. The D lines are at a distance of 6 \AA from each other, but the line $\lambda = 6708 \text{ \AA}$ has components separated by 0.13 \AA only. Thus a very strong field of the magnitude of 180,000 Gauss will be necessary to produce the complete Paschen-Back effect in the case of the D lines, but a comparatively weaker field will be required to produce the same effect for the lithium line. Thus the magnetic fields usually produced in the laboratory exhibit the normal Zeeman-effect for the lithium line, and the anomalous types for the D lines.

There is also another type of Paschen-Back effect known as the Partial Paschen-Back effect. This can be explained by considering the case of lines belonging to (pd) combination. The applied magnetic field will be strong for the d-terms (*e.g.*, d_1, d_2, d_3), if the Zeeman separations which it produces are large compared with original separations $\Delta\nu_0$ of the same terms; it will be considered as weak for the p-terms, if the Zeeman separations $\Delta\nu$ are small compared with $\Delta\nu_0$ of the p-terms. In this case neither the normal type nor the anomalous type is observed, but a distorted Zeeman type is produced. This is termed the Partial Paschen-Back effect.

We now turn our attention to a quantitative explanation of the transformation of the D type of lines from the anomalous to the normal Zeeman pattern under the influence of a gradually increasing magnetic field. Sommerfeld¹ starts with Voigt's² theory of this transformation, which is based, as in

¹ Sommerfeld, Gottinger Nach, Marz, 1914.

Ann d Phy, 63, 221 (1920).

² Voigt, Ann d Physik, 41, 403 (1913) and 42, 210 (1913).

Lorentz's theory, on the idea of quasi-classic electrons capable of vibration in an atom. As the intensity of D_2 , $D_1=2/1$, Voigt supposes the existence of two electrons of the frequency of D_2 and one of the frequency of D_1 . Starting with the equations of vibration of these electrons in the magnetic field, Voigt arrived at certain results, which have been put in the language of the quantum theory by Sommerfeld, and the result is derived in the form $\Delta \nu = m \pm \sqrt{1 + \frac{2m\nu}{h-\frac{1}{2}} + \nu^2}$ (20)

where $\Delta \nu$, the separation between the components, is measured in terms of $\Delta \nu_{\text{norm}}$ from the middle of the original doublets, not under the influence of the magnetic field, k is the azimuthal quantum number and m the magnetic quantum number. The upper sign of the quantity under root corresponds to $j = k + \frac{1}{2}$, and the lower sign to $j = k - \frac{1}{2}$, where j is the inner quantum number, ν is given by the relation

$$\nu = \frac{\Delta \nu_0}{\Delta \nu_{\text{norm}}} = \frac{H_1}{H} \quad (21)$$

where $\Delta \nu_0$ is the original separation of the doublets, without the magnetic field, and H_1 is the internal magnetic field of the atom. Equation (21) can be put in the form $\nu = \Delta \nu_0$ (22) if $\Delta \nu_0$ and $\Delta \nu$ are both measured in terms of $\Delta \nu_{\text{norm}}$.

The deductions from the formula (20) have been verified by the observations of Kent.* Putting $\nu > 1$ and expanding the quantity under root, we get

$$\sqrt{1 + \frac{2m\nu}{h-\frac{1}{2}} + \nu^2} = \nu + \frac{m}{h-\frac{1}{2}} \quad (23)$$

Applying the relations (22) and (23), (20) transforms to

$$\Delta \nu \mp \frac{1}{2} \Delta \nu_0 = m \left(1 \pm \frac{1}{2k-1} \right) \quad (24)$$

The expressions $1 + \frac{1}{2k-1}$ and $1 - \frac{1}{2k-1}$ give the same value for g , for $j = k + \frac{1}{2}$ and $j = k - \frac{1}{2}$ respectively as is shown in Lande's table for the 'g-factor'.

* Kent, Astro. Journ. 40 343 (1914)

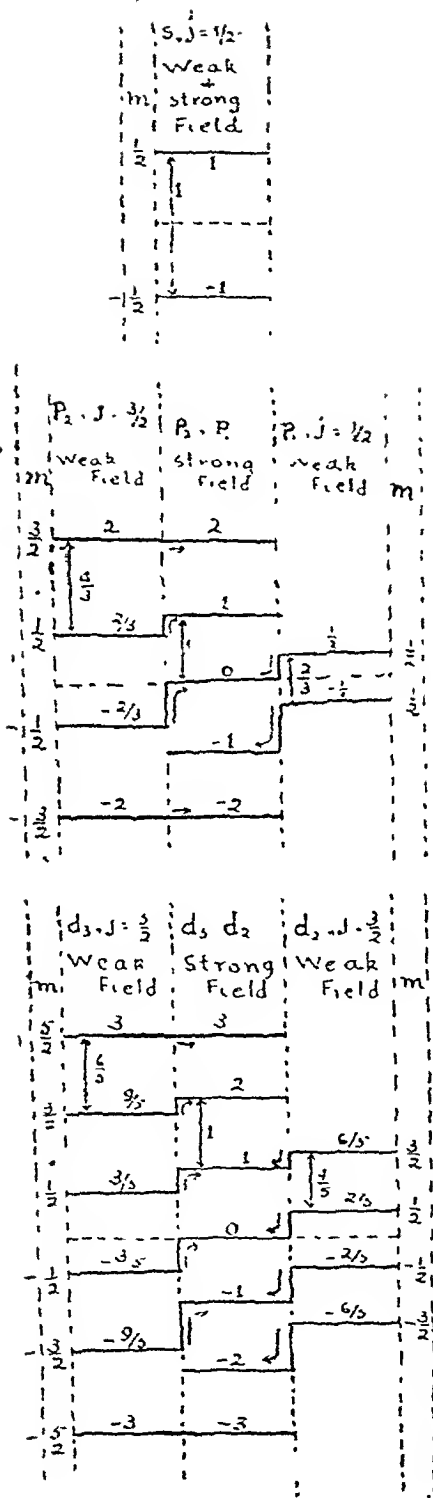


Fig. 7

For a strong magnetic field, $\lambda = 0$, and from (20) we obtain

$$\Delta\nu = m \pm \frac{1}{2} \quad (25)$$

Because m is half an integer for the doublet terms, $\Delta\nu$ or $m \pm \frac{1}{2}$ is an integer, and as $\Delta\nu$ has been expressed in terms of $\Delta\nu_{\text{norm}}$, the magnetic levels follow each other at a distance of $\Delta\nu_{\text{norm}}$ apart. On account of the principle of selection for the s and p components, as given previously, the combination of the separations $\Delta\nu$ of the two terms is given in (25), gives rise to a normal Lorentz triplet.

In Fig. 7 is shown the transformation of the magnetic energy levels of the anomalous Zeeman type of doublet system, when subjected to gradually increasing magnetic field till the Paschen-Back effect is completed. The two outer columns correspond to weak magnetic fields, and the middle column to strong field. The values of $\Delta\nu$ are measured from the positions of the original energy-levels without any magnetic field, but those in the strong field are measured either from their mid-point or from their centre of gravity as explained below. The arrows denote the direction in which the changes take place. In the figure is also shown that the levels which are originally in the normal position, undergo no transformation as for s , and for the two outermost levels of p_1 and d_1 .

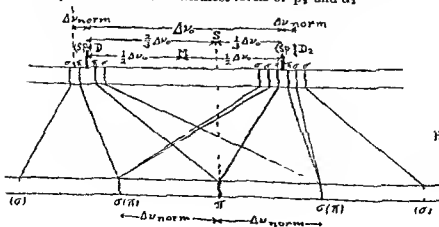


Fig. 8 depicts the changes in the positions of the individual components of the Zeeman pattern of (sp) combination of the doublet system, i.e., of the well-known D_1 and D_2 type. In the upper part of the figure, the original positions of D_1 and D_2 with their Zeeman components in the transverse effect as well as their state of polarisation are shown. M and S denote the mid-point and the centre of gravity of D_2 and D_1 , D_2 being twice as intense as that of D_1 . The final positions of the individual components, when Paschen-Back effect sets in are connected with their initial positions by oblique straight lines, with the difference that the scale of $\Delta\nu_{\text{norm}}$ in the final position is on an arbitrary bigger scale than in the first position. The components within brackets as (π) and (σ) denote that their intensities asymptotically approach to zero values in the final stage of the transformation. On both the sides of the central π component there are two (σ) components, which have zero intensity and are therefore not at all visible. The same remark applies to the case of the two (π) components coinciding in position with the two (σ) components.

We can now explain why the two π components of both the p terms coincide with the centre of gravity S of D_2 and D_1 . Starting from equation (20), we obtain by approximation in the limit $v=0$.

$$\Delta\nu = m \pm \frac{1}{2} \left(1 + \frac{mv}{k - \frac{1}{2}} \right) \dots \dots \dots (26)$$

In accordance with our original assumption about $\Delta\nu$ we put

$$\Delta\nu = \frac{\Delta\nu^1}{\Delta\nu_{\text{norm}}} \dots \dots \dots (27)$$

Where $\Delta\nu^1$ is measured in cm^{-1} , remembering

$v = \frac{\Delta\nu_0}{\Delta\nu_{\text{norm}}}$, we obtain from (26)

$$\Delta\nu^1 \mp \frac{m}{2k-1} \Delta\nu_0 = (m \pm \frac{1}{2}) \Delta\nu_{\text{norm}}$$

For the π components of the Paschen-Back triplet we have to set $m \pm \frac{1}{2} = 0$. Thus for the p term we obtain $\Delta v + \frac{\Delta v_0}{6} = 0$, as $k=2$. The position $\frac{\Delta v_0}{6}$ from M coincides exactly with the centre of gravity S, and hence the position of the π components is explained.

Similarly we can account for the position of the σ components by applying the selection principle $m \pm \frac{1}{2} = 1$.

Voigt's theory also furnishes us with a means of calculating the ratio of the intensities of the components in the Paschen-Back effect, as has been done by Sommerfeld. Lande has extended the results of Voigt's theory to the term-combinations of higher multiplet systems, but Sommerfeld considers this to be without any experimental basis, as the measurements in the Paschen-Back effect have not been pushed to that degree of precision, which the extension of the theory by Lande demands. Hence Sommerfeld mentions of an empirical generalisation by Pauli,¹ which explains some of the observed results in the case of triplets and multiplets of higher system.

4 CONCLUSION

We have thus reviewed the progress in the interpretation of the complicated Zeeman types of spectral lines. The excellent quantitative measurements by Back² of the Zeeman types of Manganese confirms the spectral classification of the element by Catalan,³ and places Lande's theory on a pretty secure basis. The recent work of Zeeman⁴ and his pupils on the Zeeman patterns of neutral scandium and ionised scandium (Sc^+) has settled some doubtful points in the classification of the spectrum lines of this element by Catalan,

¹ Pauli *Zs. f. Phys.* 16 155 (1923)

² Back loc. cit.

³ Catalan *Phil. Trans. London* 223 127 (1922)

⁴ Goudsmit, Mark and Zeeman *Proceedings of the Royal Academy of Amsterdam* 23 127 (1925)

thus the work of Lande in this direction has been a source of powerful aid in the classification into series of the many-lined spectra of some elements, in so far as the data on Zeeman-effect is available. The rapid progress which is being made in the measurements of complex Zeeman types like those of Neon, will enable us in the near future to understand the nature of the complicated spectra of Bismuth, Tin, Lead and Antimony, and thus throw much light on the structure of the atom.

ON A NEW PROTEOCEPHALID CESTODE FROM AN INDIAN FRESH- 'WATER FISH

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(With Plates 1 and 2.)

Very little work has so far been done on the cestode parasites of Indian fresh-water fishes. Apart from the brief descriptions of Southwell (1913—a, b ; 1915—a, b) there exists a paper by Woodland (1924) describing a new *Bothriocephalus*, and two new *Proteocephalids*. One of the latter he regarded identical with Southwell's *Ophryocotyle bengalensis*, but still preferred to name it *Gangesia wallago* in this paper. Subsequently, however, in another paper (1925—b) he agrees to call his *Gangesia wallago* as *P. bengalensis*. The species of *Proteocephalus* described here is interesting not only because of some remarkable features in its anatomy but also because it is one of the very few species of the genus known from Indian fishes.

Proteocephalus ritaii, n. sp.

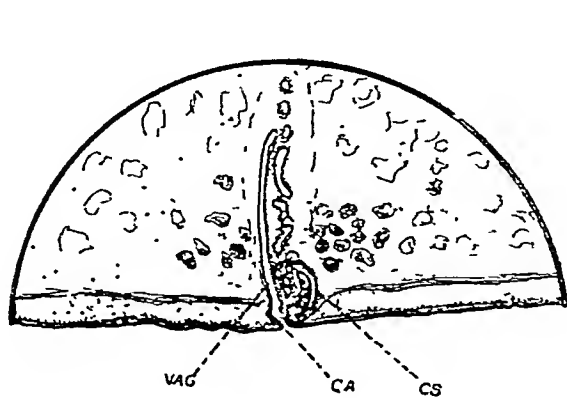
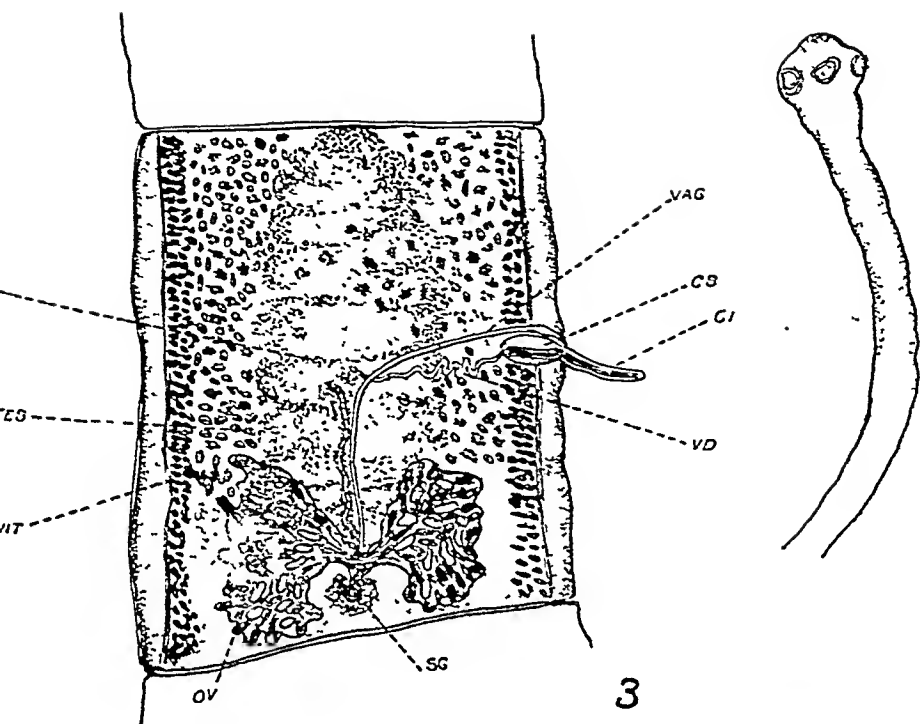
The cestode occurs in the duodenum and small intestine of the local Siluroid fish, *Rita rita* (= *Rita buchmanii*, Day), obtained from the rivers Ganges and Jumna. The species is not very common, for out of about 100 fishes examined during the course of a whole year only ten per cent carried the worm. It is interesting to note that younger fishes not exceeding ten or twelve inches in length were without exception found free from the parasite. The writer had an opportunity of examining most of the local fishes, and has so far failed to detect

this species from any other fish, hence it may be reasonably concluded that the infection is probably of a specific nature. Only four perfect scolices have yet been obtained, one of which was accidentally lost. The worms were kept alive in normal salt solution for two to three days, and were fixed in Mann's and Bouin's fluids with and without pressure. Permanent preparations were made from pieces pressed between two glass slides before fixation, and horizontal and transverse serial sections were cut from specimens not so treated. Fairly large portions of the strobila were preserved in 5% formalin.

EXTERNAL ANATOMY

Proteocephalus ritan is a long, white, fairly transparent worm. The length of the cestode varies greatly, living specimens in salt solution measured about 75 mm. to 125 mm. A single specimen obtained from one fish was well over 100 mm. long. The greatest breadth attained when alive is about 3 mm., but well preserved unpressed formalin specimens in their widest part are about 2.18 mm. broad. Therefore this tapeworm is considerably longer than *P. ugrinus* (30—40 mm.), *P. beddardi* (40—80 mm.), *P. synodontis* (30 mm.), *P. bengalensis* (35 mm.), *Gangesia macronex* (28—56 mm.) and *Ichthyotaenia fillicolis* (24—33 mm.)—the allied fish cestodes. The number of proglottids is very large ranging from about 600 to 1,000 and probably more. In the single specimen of about 100 mm. length, mentioned above, about 750 segments could be easily counted, and a mounted preparation consisting of 10 mm. in length of the anterior portion of the strobila, just posterior to the neck, contains more than 300 segments.

The head or scolex is small but distinctly set off from the neck. It is not very conspicuous when fully elongated, and is knob-like or pear shaped in outline in preserved specimens, measuring 0.224 mm. in breadth and 0.144 mm. in length. The four suckers with their cavities facing outwards and anteriorly appear to be borne on protrusible lobes.



from one another by four longitudinal grooves. Each sucker has a muscular portion and a distinct thin-walled free edge surrounding a circular opening. The suckers are rather minute structures, being only about 0.045 mm. in diameter, and like all other parts of the scolex, are unarmed possessing neither spines nor spine-lets. The apex of the scolex is slightly prominent and bears in its centre a rosette of short muscular papillæ, apparently devoid of lumen. It may be, as suggested by Woodland (1925—b), neither a functional apical sucker nor a mere "muscle plug" remnant of a muscular rostellum. In this respect and also in its size this scolex resembles that of *P. tigrinus*. The unsegmented neck is peculiarly long. It measures 5 to 10 mm. or even more according to the nature of contraction of the anterior region, and in the specimen whose scolex dimensions are noted above its narrowest part does not exceed 0.112 mm. in width. The neck gradually broadens out posteriorly and passes imperceptibly into the anterior proglottids. The latter are very narrow being about three times as broad as long, but posteriorly they increase in length proportionately. The anterior mature proglottids (from 250—350) are nearly twice as broad as long, but the posterior mature proglottids, above 400, are just as broad as long; later on the length preponderates over the breadth and gravid segments are a bit longer than broad.

The sides of the proglottids are more or less salient, but neither do the corners project nor do the hind borders overlap succeeding proglottids. The genital openings alternate irregularly and do not present any regular sequence, but at indefinite intervals there is a marked tendency towards an unilateral arrangement for the ducts of 5 to 8 consecutive segments repeatedly open on the same margin as indicated by the two following series:—

(1) RLLLLRRRLLRRLRLLLLLLLRLR.

(2) RLLLLLLLRLRLRLRLRLRLRL.....13 segments.....LLLL.....17 segments.....LLLLLRLR.

The openings are always situated somewhat in advance of the middle of the proglottis margin, and the vaginal aperture is invariably anterior to that of the male duct. In unpressed specimens they are situated at the base of a notch in the proglottis margin forming a sort of genital atrium or cloaca, but in well-flattened preparations a genital atrium becomes indistinct. The cirri are often seen projecting out of the pores and when fully everted (as is usually the case in portions of the strobila flattened between slides before fixation) measure 0.26 mm to 0.35 mm in length and 0.032 to 0.048 mm in breadth.

INTERNAL ANATOMY

The neck as well as the entire strobila is covered by a well-developed cuticle consisting of a dark staining outer layer, and a more homogeneous feebler staining inner layer. Following the cuticle is a layer of circular muscle fibres, and then one of longitudinal muscle fibres (sub-cuticular). Another more powerful layer of longitudinal muscle fibres is situated deeper in the parenchyma dividing it into a cortical and a medullary portion.

The excretory system consists of two main longitudinal vessels situated ventrally to the inner side of the deeper layer of longitudinal muscle fibres at a distance of about one-fifth the breadth of the proglottid from the margin.

The nervous system is apparently of the usual type. Two longitudinal nerve-trunks run down the lateral margins of the body just internally to the inner layer of longitudinal muscle fibres.

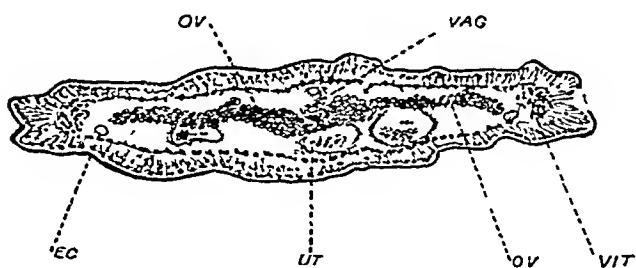
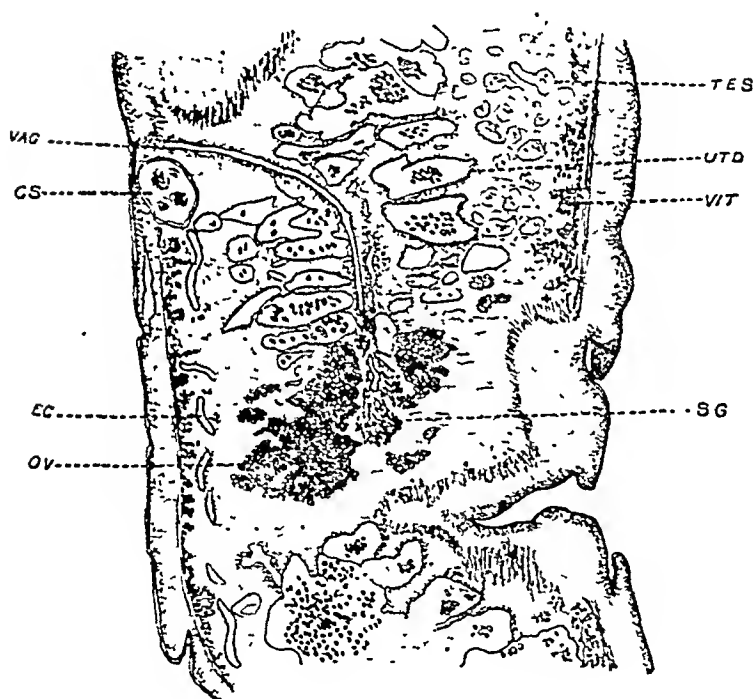
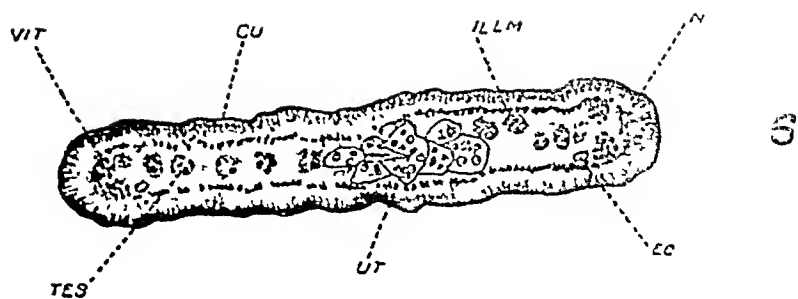
Male Reproductive Organs.—The first rudiments of the testes appear in segments 40 to 60, but in whole mounts are detected about the 100th segment, and become fully established after another twenty to thirty segments. They reach maturity about the 150th segment, and appear as small roundish sacs in subsequent proglottids situated in a continuous dorsal field in the medullary region. In mature segments their

number varies from 150 to 200: seen in surface view, 100 to 125 lie in that longitudinal half of the proglottid which does not contain the genital ducts and their openings; 30 to 50 in the quadrant anterior to the transverse reproductive ducts, and 20 to 30 in the quadrant behind them. The testes are usually situated entirely anterior to the ovaries, and dorsal to the uterus. They measure in transverse sections 30 to 40 microns, and in flattened toto-preparations 40 to 60 microns, and are sparsely situated in the region of the uterus, the male and female ducts. The vas deferens is the first part of the genitalia to be clearly differentiated. Its inner portion is easily visible in segments 50 to 60, but it is not before the 160th segment is reached that it is seen right up to the proglottis margin. The breadth of the strobila in this region is only 0.75 mm. The cirrus sac makes its appearance in segments 125 to 130, but becomes clearly established in segments 140 to 150. The vas deferens in a mature proglottid commences as a coiled delicate tube from about its middle and running a more or less sinuous course towards the outer margin becomes continuous into the cirrus. The cirrus sac extends roughly over one-sixth of the breadth of the proglottid. It is oval in shape and uniform in size and thickness and measures in horizontal sections of mature proglottids 0.128 mm. by 0.192 mm. When unpressed or contracted it contains coils of the ductus ejaculatorius. The cirrus is protrusible as mentioned above and has muscular walls with a narrow lumen.

Female Reproductive Organs—These do not appear much earlier than the male organs. The first rudiments of the ovaries make their appearance in the same segments as the testes or in some cases a few segments anteriorly. They begin to assume their mature form in about the 100th segment, and after traversing another 50 segments become clearly established. The ovary is, as usual, bilobed and granular when viewed from the surface: each lobe is made up of many elongated follicles and is transversely broadened in the anteriorly placed mature

segments, but it gradually assumes an approximately circular or pear-shaped outline in the hinder segments. It is confined to the posterior one-third of the segment and the two lobes are connected medially by a prominent isthmus, to the dorsal side of which lie the vagina, the uterine duct and the oviduct. The shell-gland is situated close behind the ovarian isthmus. The oviduct runs from the isthmus towards the shell-gland, and after meeting the vagina passes through the shell gland and enters the uterine duct. The vagina is slightly dilated in the vicinity of the marginal opening and runs inwards parallel and anterior to the vas deferens. Before it approaches the middle line of the proglottid it turns backwards, passes posterior to the vas deferens and takes a straight course towards the shell-gland. The vitellaria are of the multivittellate type consisting of bands of numerous small acini running along each lateral margin of the segment on the inner side of the longitudinal layer of muscle fibres.

The uterine rudiments become visible after the first 100 or 125 segments as short narrow granular pillars running in the antero-posterior axis about the middle of the segments. In segments 130 to 140 the uterus becomes a distinct elongated sac-like structure, but the eggs appear clearly after another hundred segments or more. The lateral diverticula develop about the 265th segment and by the 275th segment cover the middle third part of the width of the proglottid showing eight to ten branches on each side. In the fully mature segments the posterior one or two pairs of the uterine diverticula overlap the anterior one-third or even half of the ovary, but do not extend further back. In ripe segments the condition of the uterus is very much like that of *P. beddardi* (Woodland, 1925—b). It shows two distinct parts, a narrow uterine canal which runs dorsal to the ovarian isthmus and an egg-storing uterus proper with its median chamber and paired lateral diverticula. The uterine duct runs anteriorly to the ovary alongside the vagina to a comparatively greater



distance than it does in *P. beddardi*, and opens into the wide median uterine chamber a little distance behind the line of the vas deferens. The ova measure 0.01 mm. in diameter, and the eggs in the uterus of mature proglottids 0.016 mm.

The above-mentioned characters thus bring the species within the genus *Proteocephalus* (as defined by La Rue 1914, and Woodland 1925), and subgenus *Teleostaenia* (Woodland).

The new species *P. ritaii* is distinguished as follows:—Length of strobila 75 to 125 mm. with a maximum breadth of about 3 mm. Proglottids numerous 600 to 1,000 in number in mature worms; very narrow in front, square about the middle of the strobila, and elongated in hinder segments. Segmentation distinct, corners do not project out, nor do the posterior borders of segments overlap the succeeding ones. Scolex small 0.224 mm. long, and 0.144 mm. broad, with four longitudinal grooves but without spines. Suckers minute, unarmed with projecting free edges. Neck fairly long gradually increasing in diameter up to the first traces of segmentation. The genital organs like those of *Proteocephalus*, uterine diverticula 8—12 in number. Testes in medulla in a continuous field, number 150 to 200 in fully mature segments. Genital apertures a little in front of the middle transverse line of the proglottid; vaginal opening invariably anterior to the cirrus sac opening. Uncontracted cirrus sac extends over one-sixth to one-fifth of the breadth of the proglottis.

Habitat—Duodenum and small intestine of *Rita rita* from rivers of Northern India.

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DESCRIPTION OF PLATES 1 AND 2

Figures 1 and 2 were drawn with the camera lucida the others were all drawn with the aid of Spencer's Electric Drawing Apparatus.

LETTERING

CS Cirrus Sac Ca, Catele FC Excretory Canal GA Genital Atrium ILM Internal Layer of Longitudinal Muscles, N, Lateral Nerve OV Ovary, SG Shell gland TFS Testes UT Uterus UTD Uterine Diverticula VAG Vagina VIT Vitellina

PLATE 1

Fig 1—Anterior end of *P. ritani* in outline showing scolex with Suckers and Neck X 19

Fig 2—Scolex mounted entire showing the Four Suckers with marginal flaps round the Apertures the Apical Organ, and the Grooves between the suckers. X 45

Fig 3—A Mature Proglottid X 25

Fig 4—Part of Horizontal Section showing Genital Atrium, and the Cirrus Sac and Vagina Openings. X 40

PLATE 2

Fig 5—Horizontal Section (slightly oblique) of a Mature Proglottid X 40

Fig 6—Transverse section of a Mature Proglottid anterior to the Genital Openings. X 50

Fig 7—Transverse Section of a Mature Proglottid in the region of the Ovarian Isthmus. X 50